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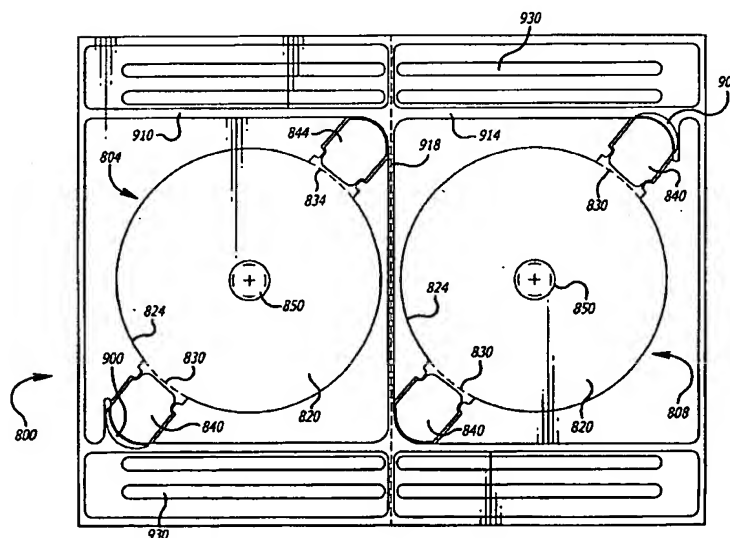
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(54) Title: OPTICAL DISC LABEL CONSTRUCTION



(57) Abstract: A facestock releasably adhered to a liner sheet is die cut to form at least one compact disc label (820), and two diametrically opposed tabs (840, 844) for each compact disc label (820) and located so that one edge of the tab (840, 844) is in contact with one of the compact disc labels (820) and is separated therefrom by a weakened separation line (830, 834). The liner side of the tab (840, 844) also has a die cut patterned so that it generally follows the outline of the tab (840, 844) but which forms a patch which is generally inside of and generally slightly smaller than the face cut tab (840, 844) pattern. After the label sheet (800) has passed through a printer or copier and the desired indicia has been printed on the labels (820), at least one of the tabs (840, 844) is pushed through from the reverse side of the sheet (800) or pulled through via a sheet (800) opening.

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## OPTICAL DISC LABEL CONSTRUCTION

### BACKGROUND OF THE INVENTION

**[0001]** The present invention relates to label sheet constructions and particularly those having labels designed for application to optical discs, such as compact discs. It more particularly relates to such labels that are cut in a facestock sheet that is releasably adhered to a liner sheet to form a label sheet. The label sheet is adapted to be fed into a printer or copier and the desired indicia printed on the labels, and the printed labels peeled off of the liner sheet to be applied to a compact disc, either directly or using an alignment apparatus. The present invention also relates to methods and systems for manufacturing these label sheets. The present invention further relates to sheet constructions, systems and methods for applying labels to tabs of divider sheets, to tabs of file folders, to envelopes and the like.

**[0002]** Commercially successful compact disc label sheets are currently available from Avery Dennison Corporation of Pasadena, California, as well as from other manufacturers. After the labels have been printed, they must be removed from the sheet prior to application to the compact discs or the like. Removal of the labels exposes the adhesive side of the label which must be handled in order to place the label either directly onto the compact disc or in an apparatus designed to align the labels concentrically with the compact disc. Handling of the adhesive side of the label can result in a loss of adhesive tack due to contamination in the area where it was handled, contributing to poor adhesion to the compact disc in the contaminated area. Additionally, adhesion of the label to the user's fingers can increase the level of dexterity required to accurately place the label in its desired location. Another example of a labeling system is disclosed in U.S. Publication No. US 2001/0025689 A1, published October 4, 2001.

**[0003]** One known label tab application method and system is provided in the INDEX MAKER Clear Label Dividers product available from Avery Dennison

Corporation. This product includes a sheet having columns of clear labels thereon attached with adhesive to a releasable liner sheet. The clear tab labels are formatted using preset layouts and existing word processing software. The tab titles are printed onto the clear label sheet using laser or inkjet printers. The printed tabs are then manually peeled off from the sheet and individually applied to the divider tabs. This system allows the user to individually custom design and print each of the tabs with the desired indicia. The clear labels virtually disappear on the divider tabs giving the dividers a clean, professional look. Formatting can use preset layouts and existing software programs such as MICROSOFT Word for Windows, COREL Word Perfect for Windows, COREL Word Perfect for DOS, LOTUS Word Pro, and LOTUS AMI Pro. The following U.S. Patents are related to this prior art product: U.S. Patent Nos. 5,135,261, 5,340,427 and 5,389,414. (All patents and other publications mentioned anywhere in this disclosure are hereby incorporated by reference in their entireties.)

**[0004]** Application of these labels can be time consuming, clumsy and subject to error, since they must be separated and then attached individually to the corresponding divider tabs. In the process of individually applying them, they often are not applied evenly or properly with the divider tab sheets. In other words, the above-described INDEX MAKER product has the problem that the labels are difficult and time consuming to remove from the backing sheet and to place and align on the tabs so they are straight. They are also small and cumbersome to handle.

**[0005]** Accordingly, a method for remedying these problems was designed and provided in U.S. Patent No. 5,947,525 to Pollman. The Pollman patent teaches using at least one set of precut labels removably attached to carrier strips that are removably secured to a backing sheet. The precut labels are spaced apart on the carrier strips to align substantially on the tabs on the divider sheets. The user can separate a carrier strip and precut labels affixed thereto from the backing sheet, place and align the carrier strip across the divider sheet such that the precut labels are placed on the tabs of the divider sheets. He then pulls the carrier sheet upwardly and away from the divider sheet such that the precut labels separate

from the carrier strip and remain on the divider's tabs. This system, while an improvement in certain respects over the prior art, has the disadvantage that the strips are typically flimsy and difficult to properly align. Additionally, the carrier strip can be sticky and thus may stick to unwanted surfaces.

#### **SUMMARY OF THE INVENTION**

**[0006]** Disclosed herein are an improved label sheet construction and a method of removing labels therefrom. The construction includes a face stock sheet releasably adhered to a liner sheet. The face stock sheet is die cut to form at least one and preferably two compact disc labels, as well as at least one and preferably two tabs for each compact disc label. Each tab is located so that one edge of the tab is in contact with one of the compact disc labels. If there are two tabs on one compact disc label, they are preferably located at diametrically opposed locations. According to one embodiment, the edges where the tabs are in contact with the compact disc labels are perforated, having a plurality of uncut segments commonly called "ties," alternating with cut segments commonly called "cuts." The liner side of the tab also has a die cut patterned so that it generally follows the outline of the tab, but which forms a shape that is inside of and slightly smaller than the face cut tab pattern.

**[0007]** After the label sheet has passed through a printer or copier and the desired indicia has been printed on the labels, at least one of the tabs is pushed through from the reverse side of the sheet, partially separating the tab from the rest of the sheet, (or pulled through a sheet opening). For some label constructions, if there is a second tab, it is preferably pushed through from the reverse side as well. The distance between the tab face cut and the parallel liner cut can be varied in the design to improve functionality, preferably being narrower at the outer extremity, so that the outer edge separates from the rest of the sheet more easily, improving the probability that the perforated edge adjacent to the compact disc label will remain intact. There may or may not be one or more ties in the liner cut near the outer extremity in order to maintain the integrity of the sheet during the manufacturing and printing processes. The tab, which is mostly free of

exposed adhesive in that it is still laminated to the die cut section of the release liner, is then grasped from the face side, and lifted upward, pulling the compact disc label away from the label sheet. If there is a second tab on the label, this is also removed as the label is removed (or peeled off), and can be grasped by the user's other hand in order to control the position of the label. The user is now able to position the label either directly onto the compact disc or into an alignment apparatus, without any significant contact to an adhesive coated surface. Once the label has been applied to the compact disc, the tabs may be removed by pulling them away from the compact disc, causing the perforation between the tab(s) and the compact disc label to separate.

**[0008]** Disclosed herein is an apparatus for removing and positioning compact disc labels without touching any adhesive-coated surface. The apparatus includes one or two tabs attached to the compact disc label. Another aspect of this disclosure is a novel method of removing compact disc labels without touching an adhesive surface by pushing the tab from behind or pulling the tab from the front and lifting the label off the sheet.

**[0009]** An alternate embodiment of the present invention includes one or more tab handles in combination with the jewel case alignment tab as described in U.S. Patent No. 5,715,934. This provides a method of positioning the label in the jewel case so that it is properly aligned with and compact disc without handling the adhesive coated surface.

**[0010]** Various other label applicator constructions are disclosed herein. Each includes facestock adhered with releasable adhesive to a liner sheet. Die cut lines are made through the facestock but not through the liner sheet; and die cut lines are made through the liner sheet but not the facestock. Portions of the label sheet are then stripped away. Using different patterns of the die cut lines or other weakened separation lines and stripped away portions, the different label applicator constructions are formed. Each is a sheet construction with a plurality of small elongate labels formed from the liner sheet and releasably held to the facestock. The sheet construction is passed through a printer and the desired

indicia printed on the labels. The printed labels are then ready for easy controlled removal and application by the user to tabs of index dividers, file folders or the like.

**[0011]** According to one definition of the invention, the label sheet is die cut on both the face and liner to facilitate the application of labels onto the dividers and file folders. The label sheet has die cuts that are oriented thereon to allow them to be aligned with either one or more sets of dividers or sets of file folders. The liner is die cut so that a strip can be removed directly from behind the labels, exposing the adhesive side of the labels. The labels are also temporarily held onto the remainder of the sheet by small ties. Removal of the liner from the label sheet allows the user to align the tabs over the substrate using the rest of the label sheet as a carrier. The application of the labels is followed by removal of the label sheet that breaks the ties, leaving just the labels on the substrate. The label applicator construction includes a pressure sensitive laminate material die cut on both the face and liner and sheeted to a standard-size sheet. The facestock of the pressure sensitive laminate material can be either paper or coated film that is toner or ink receptive. The adhesive can be permanent or removable, depending on the level of adhesion needed for the end user.

**[0012]** A first construction/method of the invention is for applying multiple labels on tab dividers/file folders. The label sheet includes die cuts that are oriented on the sheet in a way that allows them to be aligned with the set of tabs if a set of dividers were stacked on top of each other. The liner is die cut so that a strip, positioned directly behind the labels, can be removed, exposing the adhesive side of the labels. The labels are also temporarily held on the label sheet by small ties. The removal of the liner from the label sheet allows the user to align the tabs over the divider set using the label sheet as a carrier. Once the labels are affixed to the tabs, the user pulls away the label sheet to break the ties, leaving only the labels affixed to the tabs.

**[0013]** An alternate method for placing multiple label on tab dividers/file folders uses a label sheet which includes labels arranged in a way similar to the first

method. In this method, the liner is die cut in the shape of the row of labels. The labels are exposed by removing the strip of liner directly behind the labels. Next, a set of dividers is placed on the exposed adhesive using the outline of the removed liner as a guide. After the labels have been pressure applied to the tabs, the label sheet is pulled away, leaving the labels affixed to the tabs.

**[0014]** A second construction/method is for applying single labels onto substrate. In this method, individual labels are placed on the substrate one label at a time. On both short sides of the label, there are "handles" that are held onto the label by small ties. These handles are used to hold the labels over the desired position and used to align the labels. After placing the labels on the desired location, the handles are removed by pulling laterally away from the label.

**[0015]** An alternate construction/method uses a single "handle" on the label. In this method, individual labels are placed on the substrate by using a single handle as an alignment tool. The handles are once again held onto the labels by small ties that are designed to be broken after the label has been placed in its desired location.

**[0016]** A third construction/method uses multiple sets of tab dividers placed in a device that uses tiered pouches. A set of dividers is placed in each of the pouches. The dividers are positioned such that when a label sheet, such as the one described in the first method, is aligned with the top row of tabs, all others will also be aligned. This allows the user to label multiple sets of dividers in a single operation.

**[0017]** Thus according to one of the present inventions, disclosed herein is a facestock which is adhered with adhesive to a liner sheet. Weakened separation lines in the facestock define lines of facestock labels. And weakened separation lines in the liner sheet define liner sheet strips separable from the body of the liner sheet to expose backsides of respective lines of labels. The rest of the liner sheet can then be manipulated to position the line of labels on staggered tabs, the labels pressed into position and separated from the rest of the facestock. Another embodiment includes facestock sheet separation lines defining the perimeters of

facestock labels with at least one facestock handle attached thereto. The liner sheet includes a portion attached to the handle whereby the handle, the label and the portion are removable as a unit from the liner sheet and the facestock, the handle manipulated to position the label so that its adhesive backside is positioned and applied at the desired surface location, and the handle and portion then separated from the label.

[0018] Other objects and advantages of the present invention will become more apparent to those persons having ordinary skill in the art to which the present invention pertains from the foregoing description taken in conjunction with the accompanying drawings.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

[0019] FIG. 1 is a front view of a first label applicator construction of the present invention;

[0020] FIG. 2 is a rear view of the construction of FIG. 1;

[0021] FIG. 3 is an enlarged cross-sectional view taken on line 3-3 of FIG. 1;

[0022] FIG. 4 is a perspective view of a first application step by a user of a label unit of the construction of FIG. 1;

[0023] FIG. 5 is a perspective view of a second application step;

[0024] FIG. 6 is a perspective view of a third application step;

[0025] FIG. 7 is a front view of a second label applicator construction of the present invention;

[0026] FIG. 8 is a rear view of the construction of FIG. 7;

[0027] FIG. 9 is an enlarged cross-sectional view taken on line 9-9 of FIG. 7;

[0028] FIG. 10 is a perspective view showing a first application step by a user of a label unit of the construction of FIG. 7;

[0029] FIG. 11 is a perspective view of a second application step;

[0030] FIG. 12 is a perspective view of a third application step;

**[0031]** FIG. 13 is a front view of a third label applicator construction of the present invention;

**[0032]** FIG. 14 is a rear view of the construction of FIG. 13;

**[0033]** FIG. 15 is an enlarged cross-sectional view taken on line 15-15 in FIG. 13;

**[0034]** FIG. 16 is a perspective view of a top portion of the construction of FIG. 13 showing a first step for applying a first series of printed labels thereof;

**[0035]** FIG. 17 is a perspective view of a second step;

**[0036]** FIG. 18 is a perspective view of a third step;

**[0037]** FIG. 19 is a perspective view of a fourth step;

**[0038]** FIG. 20 is a front view of a preferred alternative embodiment of the third label applicator construction;

**[0039]** FIG. 21 is a view similar to FIG. 20 but with dimensions indicated thereon;

**[0040]** FIG. 22 is a rear view the embodiment of FIG. 20 with dimensions indicated thereon;

**[0041]** FIG. 23 is a front view of a fourth label applicator construction of the present invention;

**[0042]** FIG. 24 is a rear view thereof;

**[0043]** FIG. 25 is an enlarged cross-sectional view taken on line 25-25 of FIG. 23;

**[0044]** FIG. 26 is a perspective view of the construction of FIG. 23 passing through a printer;

**[0045]** FIG. 27 is a perspective view of a top portion of the printed construction of FIG. 26 showing a first step for applying a first series of printed labels thereof;

**[0046]** FIG. 28 is a perspective view of a second step;

**[0047]** FIG. 29 is a perspective view of a third step;

- [0048]** FIG. 30 is a perspective view of a fourth step;
- [0049]** FIG. 31 is a partially cross-sectional view showing an envelope or pouch of the present invention holding a plurality of offset-stacked sets of dividers ready for application of printed labels from a label construction such as that of FIGS. 23 or 28;
- [0050]** FIG. 32 is a schematic view showing a manufacturing process of a label applicator construction of the present invention;
- [0051]** FIG. 33 is a top plan view of a label sheet of the present invention;
- [0052]** FIG. 34 is an enlarged view of a portion of the sheet of FIG. 33;
- [0053]** FIG. 35 is an enlarged view of another portion of sheet of FIG. 33;
- [0054]** FIG. 36 is an enlarged view of yet another portion of the sheet of FIG. 33;
- [0055]** FIG. 37 is an enlarged view of a further another portion of the sheet of FIG. 33;
- [0056]** FIG. 38 is a top plan view of an alternative label sheet of the present invention after having passed through a printer or a copier and indicia printed thereon;
- [0057]** FIG. 39 is an enlarged view of a portion of the sheet of FIG. 38;
- [0058]** FIG. 40 is a view of one of the label assemblies of sheet of FIG. 38 after having been peeled off of it;
- [0059]** FIG. 41 is a perspective view of a label assembly of the present invention shown in place on a label applicator device;
- [0060]** FIG. 41a is a view similar to FIG. 41, showing a CD in a resting position;
- [0061]** FIG. 42 is a perspective view of a second label assembly of the present invention shown in position on a label applicator device;
- [0062]** FIG. 43 is a perspective view of a third label assembly of the present invention shown being positioned on a label applicator device;

**[0063]** FIG. 44 is a top perspective of another label assembly of the present invention shown in position on another label applicator device;

**[0064]** FIG. 45 is a side elevational view of FIG. 44;

**[0065]** FIG. 46 is a view similar to FIG. 44 showing a full face label;

**[0066]** FIG. 46a is a side elevational view of FIG. 46;

**[0067]** FIG. 47 is a top plan view of an alternative label sheet of the present invention;

**[0068]** FIG. 48 is a top plan view of an alternative label sheet of the present invention;

**[0069]** FIG. 49 is a top plan view of another label sheet of the present invention;

**[0070]** FIG. 50 is a top plan view of a label assembly for a business card compact disc of the present invention;

**[0071]** FIG. 51 is a top plan view of another label assembly for business card compact disc;

**[0072]** FIG. 52 is a top plan view of a label assembly sheet which includes a jewel case insert.

**[0073]** FIG. 53 is a top plan view of another label of the present invention;

**[0074]** FIG. 54 is a top plan view of a further label of the present invention;

**[0075]** FIG. 55 is a top plan view of another (paper) label sheet construction of the present invention;

**[0076]** FIG. 56 is a bottom plan view thereof;

**[0077]** FIG. 57 shows a (Mylar) alternative of the construction of FIG. 55;

**[0078]** FIG. 58 shows a (transparent) alternative;

**[0079]** FIG. 59 a bottom plan view of the construction of FIG. 57;

**[0080]** FIG. 60 is a perspective view showing label sheet constructions of FIG. 55 (or FIGS. 57 or 58), for example, passing through a printer or copier and desired indicia being printed on the labels thereof;

**[0081]** FIG. 61 is a perspective view showing a label sheet construction of FIG. 55, for example, after being separated in half and passing through a printer and indicia being printed on a label thereof;

**[0082]** FIG. 62 is a perspective view showing a (printed) spine label peeled off of a label sheet construction (such as that of FIG. 55) and being applied to a spine of a container, such as a jewel case for the CD to which a printed label from the same label sheet construction is applied;

**[0083]** FIG. 63 is a top view of a portion of the label sheet construction of FIG. 57, for example, showing a user grasping one of the tabs and peeling the attached labels thereof;

**[0084]** FIG. 64 is a top plan view of another label sheet construction of the present invention;

**[0085]** FIG. 65 is a bottom plan view of the label sheet construction of FIG. 64;

**[0086]** FIG. 66 is a top view of a portion of the label sheet construction of FIG. 64 showing a user grasping a tab thereof and peeling off a printed label thereof;

**[0087]** FIG. 67 is an enlarged cross-sectional view showing the peeled off label (of FIG. 66, for example) adhered to a surface, such as that non-data surface of a CD;

**[0088]** FIG. 68 is a view similar to FIG. 67 but showing the tab being manually removed from the adhered label of FIG. 67;

**[0089]** FIG. 69 is a block diagram representation of the various stations or steps for manufacturing a label sheet construction (such as that of FIG. 55) of the present invention;

**[0090]** FIG. 70 is a schematic view showing an arrangement of the present invention of the dies and rollers of a method for cutting a liner in the manufacture

of a label sheet construction, such as that of FIG. 54 and pursuant to the steps of FIG. 69; and

**[0091]** FIG. 71 is a view similar to that of FIG. 70 and illustrating an alternative arrangement.

#### **DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION**

**[0092]** A number of different label applicator constructions of the present invention are disclosed herein and will now be described. Generally speaking, each is formed as a sheet construction having a liner sheet with a facestock attached to the back side thereof. One embodiment is to form the sheet construction as a laminate having an ink and/or laser receptive top coat facestock laminated with pressure sensitive adhesive to a release-coated paper liner. The facestock has weakened separation lines formed therein to define a plurality of facestock labels. Weakened separation lines in the liner sheet form the liner sheet so it can be separated into portions to assist in the proper placement of the facestock labels on the tabs of the index dividers, file folders or the like. More particularly, the weakened separation lines of the liner sheet allow the liner sheet to be separated such that one or more portions of the liner sheet can be manually handled by the user in the placement of the facestock labels so that he need not touch the labels. Additionally, the liner sheet portions thereby defined help the user properly position the facestock label(s) on the tab(s). As will become apparent from the following detailed descriptions, some of the embodiments herein allow the user to individually remove and manipulate labels and others allow for an entire line or row of labels to be essentially simultaneously applied to a line of stacked, staggered tabs in a manner that is an improvement over the problems experienced with the previously-mentioned Pollman method.

**[0093]** The weakened separation lines can be formed by generally any known method. A preferred method for many of the lines is to die cut them. Each of the die cut lines typically will penetrate only one of the liner sheet or the facestock sheet. And the die cut portions of the liner sheet or facestock sheet are maintained on the label applicator sheet construction by the adhesive so that they

will not separate from the sheet while the sheet is being passed through a printer or copier. Instead of die cutting, the weakened separation lines can be formed by perforated lines or other means as would be apparent to those skilled in the art.

**[0094]** A first label applicator construction of the present invention is shown in FIGS. 1 through 6, generally at 100. It can be understood from FIG. 3 that the facestock sheet 104 is attached with adhesive 108 to the liner sheet 112. Both the liner sheet 112 and the facestock 104 have die cut lines. The pattern for the die cut lines 116 of the liner sheet 112 is best shown in FIG. 2, which is the rear view of the sheet. FIG. 1 then shows the pattern of the die cut lines 120 in the facestock 104; and as can be understood therein and also from FIG. 3, portions of the facestock have been stripped away to form the edge margins 124 of the construction. These margins are provided to reduce adhesive buildup in the printers and provide sheet flexibility to improve feeding in the printers. Additionally, a gutter strip 128 has been removed from the center and a perforation line 132 formed down the center of the liner sheet 112. This allows the construction 100 to be divided into two parts by the user. Two smaller label applicator construction sheets are thereby formed for passing through the printer or as may be desired by the user.

**[0095]** Referring to FIG. 1, the facestock sheet is cut by the die cut lines 120 into four columns of ten rows of labels. Of course, different numbers of columns and rows or different patterns (non-matrix) of the labels can be used as needed. Each of the facestock labels has a two part construction, each having a large rounded corner rectangle 140 attached with a perforated line or ties 144 to a smaller rounded corner rectangle 148. The liner sheet is then cut to define a similar number of columns and rows of small rounded corner rectangles 160, each positioned on the back of the respective rounded corner rectangles 144 of the label and adhered thereto by the adhesive 108. The smaller facestock label rectangle 148 defines a handle portion of the label unit 150, and the larger rectangle 140 defines the actual facestock label of the unit 150 on which indicia 164 is printed. A respective liner sheet 160 rectangle is adhered to this handle portion 148 of the unit 150.

**[0096]** The sheet construction 100 is passed through a printer or a copier, such as shown in FIG. 26 at 170. And the desired indicia 164 are printed on the facestock label portion 140 of the unit 150. It is anticipated that all of the facestock labels 140 will be printed in a single pass through the printer 170. However, it is within the scope of the invention to print less than all of them and then pass the sheet through a second, third, or more times to print on the remaining labels. Alternatively, the user can hand write on some or all of the labels 140.

**[0097]** After the label 140 has been printed, or handwritten thereon, with the desired indicia 164, the label unit 150 is pulled off the rest of the sheet, as shown in FIG. 4, by the user grasping the liner sheet portion 160 and the handle portion 148 and removing them along their die cut lines from the surrounding liner sheet and facestock sheet and pulling the label portion 140 off of the underlying liner sheet with adhesive 108 remaining on the bottom portion of the label. The user then manipulates the label portion 140 into a desired position on the tab 174 by holding and manipulating the facestock handle portion and the attached liner sheet portion, as shown in FIG. 5, between his thumb 178 and forefinger 182. The label 140 is then pressed down by the user and adhered with the adhesive 108 in the desired position on the tab 174. The handle portion with liner sheet portion attached thereto are separated from the printed adhered label by tearing along the perforation line or ties 144 as shown in FIG. 6. Thereby the printed label 140 is accurately positioned by the user and without the user touching the label portion and thereby dirtying it or smudging it with body oils from the user's fingers or the user's fingers adhering to the adhesive.

**[0098]** FIGS. 7 through 12 illustrate a second label applicator construction of the present invention generally at 200. It is seen therein that it is conceptually similar to the construction 100 in that removable label units 202 are defined by die cut lines 204, 206 in the facestock 208 and in the liner sheet 212, and adhesive 214 is provided between the sheets. However, instead of the facestock portion being formed by a large elongate rectangle defining the label with a smaller elongate rectangle parallel thereto along a side edge defining the handle portion, a different

configuration is shown in construction FIG. 7. Although the unit 202 of FIG. 7 includes a similar elongate rectangular facestock label 216, facestock handle portions 220, 224 are formed at each end thereof and with perforation lines or ties 228, 232 between the ends of the facestock label and both of the handle portions. Similarly, liner sheet portions 236, 240 are die cut on the backs of each of the facestock handle portions 220, 224, respectively. The liner sheet portions 236, 240 have slightly smaller dimensions than the respective handle portions 220, 224, defining a thin facestock margin about the perimeter of the liner sheet portions.

**[0099]** After the sheet 200 has been passed through a printer or a copier and the desired indicia 250 printed on the labels 216, as shown in FIG. 10, the two end handle portions 220, 224 and liner sheet portions 236, 240 are grasped and pulled away from the sheet and the facestock label 216 peeled off from the liner sheet 212 with a layer of adhesive on the back of the label. With the two handle portions grasped by the user, the label unit 204 is positioned such that the label 216 is in the desired position on the tab 254 as shown in FIG. 11, and the label 216 is then pressed into position. The two handle portions 220, 224 are then pulled away along the perforation lines 228, 232 from the ends of the adhered label, as depicted in FIG. 12. Thereby, similar to the sheet 100, the facestock label 216 itself is never touched by the user.

**[00100]** Referring to FIGS. 13 through 19, a third label applicator construction sheet of the present invention is shown generally at 300. It is seen also to comprise a liner sheet 304 and a facestock 308 attached with adhesive 312 to the face of the liner sheet. Similar to the other constructions disclosed herein, margin edges 316 of the facestock have been cut and removed as well as a center gutter portion 320 and a perforation line 324 through the liner sheet and down the middle of the liner sheet as formed. The facestock has been die cut to form lines 328 of spaced rounded corner rectangular labels 332, each connected to adjacent labels with thin strips 336 and with the die cut line extending from the end labels to the edge of the facestock. The liner sheet 304 is die cut 340 with end lines extending all the way to but spaced a small distance to form a small break-away tie at the

edge of the sheet. The die cut lines extend in a distance and then extend down, across and up, parallel to the outer shape of the adjacent label but spaced outwardly a slight distance therefrom and extending out to form a small plateau 350 between adjacent labels similar to the spacing on the facestock sheet between the adjacent labels. The label liner sheet portions 354 are adhered to respective ones of the facestock labels 332 while the sheet is intact and passed through the printer or copier.

**[00101]** After passing therethrough and with desired indicia 360 printed on the labels 332, the liner strip 364 at the top of the sheet is pulled away and separated from the remainder portion 370 of the sheet. The liner sheet portions mentioned above are removed with the liner sheet strip together with a liner sheet bar at the top 374. This step is shown in FIG. 16. The adhesive connection between the facestock and the liner sheet and the small ties at the end of the liner sheet cut lines, hold the sheet intact and prevent the liner strip 364 from separating before it is manually pulled away by the user after the printing. When it has been pulled away, the liner sheet portions 354 on the backs of the respective facestock labels 332 are removed thereby exposing the adhesive back sides of the line of labels 332 at the top of the remaining sheet portion 370. The top row of exposed labels 332 extends a slight distance out from the top edge of the sheet. The large remaining sheet portion 370 can then be manipulated by the user into the desired position aligned with the set of tab dividers 374 or file folders with their staggered tab 378. The body portion 370 provides a strong, not flexible or flimsy, handle for manipulating and accurately positioning the top row of exposed labels onto the desired positions on the staggered tabs as shown in FIG. 17.

**[00102]** Each of the properly positioned labels 332 is then pressed flat down to form a strong adhesive bond onto the respective tabs 378 as depicted in FIG. 18. The body handle portion 370 of the sheet is then pulled away from the adhered labels 332, breaking the thin facestock ties between the adjacent labels and leaving the labels in position. Referring back to FIG. 15, the next top liner strip is removed to expose the backsides of the second line of printed labels. The second line of printed labels are then manipulated into position on a second set of

staggered dividers, the labels pressed into position and the remaining smaller body portion removed. This can be understood by again viewing FIGS. 17 through 19.

**[00103]** The fourth embodiment of FIG. 20, shown generally at 400, is an improvement over the embodiment of FIG. 13, and a number of small differences are apparent. It similarly includes facestock 404, liner sheet 408, adhesive, and cut lines to form labels 416, strips, etc. One of the differences is that there is an increased offset between the face and liner cuts. Also, there are more rounded corners, additional ties are provided on the faces, additional ties are provided on the liners and additional rows of labels are provided. The face cuts are provided to relax the post-laser curl in laser printers.

**[00104]** Referring to FIG. 21, preferred dimensions in inches are: 430a (0.063), 430b (1.251), 430c (R0.125 typical), 430d (0.750), 430e (0.438 typical), 430f (0.219), 430g (0.547), 430h (1.656 typical), 430i (2.031 typical), 430j (0.824 typical (this half of sheet only)), 430k (.006 first row .008 second, third row; .010 fourth row tie typical (this half of sheet only)), 430l (0.187 ref.), 430m (0.094 typical), 430n (0.010 tie typical both sides), 430o (0.006 tie typical both sides), 430p (4.025 typical), 430q (0.075), 430r (R0.109 typical), 430s (8.500 web width ref.), 430t (0.063 typical), 430u (0.010 tie typical both ends), 430v (0.188 typical), 430w (0.188 typical), 430x (10.875) and 430y (11.000)

**[00105]** It can be seen that ten cavities are provided across by five around at 1.656 inches by .438 inch. Five ties per cavity as are provided on one-half of the sheet, and four ties per cavity on the other half of the sheet. The two surrounding cavities are 10.875 inches by 4.025 inches. The 1.5 mil polyester face is cut through to the 3.0 mil paper liner.

**[00106]** Referring to FIG. 22, preferred dimensions in inches are: 440a (1/8" cut x 1/32" tie), 440b (0.031), 440c (4.250), 440d (0.015 tie typical both ends each repeat), 440e (0.235 both ends), 440f (0.031 tie typical), 440g (0.366), 440h (0.015 tie typical both ends), 440i (0.015 tie typical), 440j (0.313 typical), 440k (0.625 typical), 440l (0.243 typical), 440m (1.250 typical), 440n (0.938 typical),

440o (0.133 typical), 440p (0.015 tie typical), 440q (0.375 typical), 440r (0.437 typical), 440s1 (1.500), 440s2 (0.750 typical), 440s3 (0.031), 440s4 (0.500), 440t (R0.125 typical), 440u (8.500 web width), 440v (R0.188 typical), 440w1 (0.531 typical), 440w2 (1.750 typical), 440w3 (2.031 typical), 440x (10.938) and 440y (11.000 circumference)

**[00107]** Referring to FIGS. 23 through 30, a fifth label applicator construction of the present invention is shown generally at 500. It similarly includes the back liner sheet 504 and the facestock 508 adhered to a front surface thereof with adhesive 512, as shown in FIG. 25. Similarly, margin 516 and the center gutter portion 520 of the facestock have been cut and removed. Die cut lines 524, 528 are formed in both the liner sheet to but not through the facestock and through the facestock to but not through the liner sheet. The die cut lines 524 through the facestock form parallel rows of spaced rounded rectangular labels 534. For example, as shown in FIG. 23, eight rows of five labels are formed. Thin breakable facestock necks separate adjacent labels in each row.

**[00108]** The die cut lines 528 in the liner sheet 504 form a plurality of liner strips 550, each of the strips is comprised of a series of rectangular liner sheet portions 554 connected at the center ends to the adjacent liner sheet portions with necks 558. Each of the liner sheet portions 554 has the same shape but with slightly larger dimensions than the underlying and attached facestock label 534. The liner sheet necks 558 provide sturdy connections between the liner sheet portions 554 such that the entire strip 550 can be removed without the liner sheet portions 554 separating. It is removed after the sheet has been passed through a printer 170 and the indicia 560 printed on the top surfaces of the facestock labels as depicted in FIG. 26.

**[00109]** In other words, the liner sheet strip 550 is peeled off or removed from the sheet, leaving the exposed backsides of the respective adhesive labels 534. The sheet can then be manipulated such that the exposed backsides of the labels 534 are positioned on the respective stacked and staggered tabs 570 of the dividers or file folders 574 as shown in FIG. 28. The labels 534 are pressed down into

position to provide a firm, straight adhesion of the labels to the tabs 570, as depicted in FIG. 29. The remainder of the sheet 578 is then pulled off of the labels 534 as shown in FIG. 30, leaving them properly applied on the tabs.

**[00110]** An advantage of construction of 500 is that more than one row of labels can be applied at the same time by removing more than one of the liner strips 534. A system for doing this is shown in FIG. 31, where, for example, four rows of printed labels can be applied at the same time to four sets of dividers 586. If the dividers 586 are offset or stacked in a stepped fashion relative to one another, a method for doing this consistently and accurately and holding the sets in this offset position is shown by the pouch 600 of FIG. 31. The pouch 600 has a series of staggered pockets 604, each for holding a respective set of dividers 586.

**[00111]** In other words, FIG. 31 shows a system of placing four rows of labels on tab dividers in a single step. The label sheet construction can be the sheet 500, for example, or constructions as illustrated herein as would be apparent to those skilled in the art. The tab dividers 586 are placed in the unique pouch 600 of the present invention, which positions them in a staggered layout. The pouch 600 can be made from a sheet of paper with several pockets 604 of the same material, glued on the body of the pouch by adhesive. The paper will preferably be ninety pound index or higher basis weight material that can be durable as sensitive dividers are placed in and out of the pouches. This pouch 600 speeds the label application process where numbers of different sets of dividers must be labeled as part of a single operation. This speeds the labeling operation and helps ensure accurate alignment and placement of the labels with minimal user handling.

**[00112]** Examples of materials usable for the label applicator constructions disclosed herein are for the clear film label for laser printers: the facestock can be 1.5 mil polyester with laser topcoating, the adhesive can be permanent acrylic adhesive, and the liner can be 3.4 mil paper release liner. For the clear film label for inkjet printers, the facestock can be 1.5 mil polyester with inkjet top coating, the adhesive can be permanent acrylic adhesive, and the liner can be 3.4 mil

paper release liner. Alternatives range from using ink and toner receptive facestock material to using both permanent and removable adhesives. As an example for paper labels, the facestock can be 4.0 mil paper facestock, the adhesive can be acrylic emulsion and the liner can be 2.8 mil paper liner.

**[00113]** A manufacturing process of the present invention as shown schematically in FIG. 32 at 700. Referring thereto, the material is a laminate consisting of an ink and/or laser receptive top coated facestock laminated via pressure sensitive adhesive to a release coated paper liner. The facestock can be ink or toner receptive paper or film. The adhesive can be any acrylic emulsion, solvent or hot melt pressure sensitive adhesive that is permanent or removable. And the release liner is a release coated liner. It is supplied in roll form 704 for converting into label sheets. The converting operation may or may not include printing, which generally speaking is not critical to the function or application of the label product.

**[00114]** The material is web fed through the converting press, such as the Mark Andy 4120, so as to pass through an initial rotary die station 712 that, when and where the product requires it, cuts through the liner but not through the polyester facestock. The anvil roller 716 is on top and the cutting die 720 is below at this station, as shown in the drawing. The rotary die that is in the initial die station may or may not include a perforation blade, which makes intermittent cut through the liner along the center of the web.

**[00115]** The web may or may not be turned over before it is passed through a second rotary die station 730 that, where the product requires it, cuts through the polyester facestock but not through the liner. The web then passes through a matrix removal station 740 that lifts and removes a section of the face material 744 which typically includes, but is not limited to, the perimeter around the label sheet and may or may not include a strip removed from the center of the sheet that coincides with the perforation in the liner.

**[00116]** Finally, the web passes through a sheeting station 750, which uses one or more cross-directional blades to cut the web into individual sheets. The sheets

are fed into a packaging/collating station 760, which includes a stacker, which stacks the sheets one on top of the other into predetermined count stacks. The individual stacks are either fed into a collator, or fed into a packaging area, where they are packaged in bulk for later collation with other materials.

**[00117]** This general concept of providing a handle or tab (or strip) attached to a label to help the user position and secure the label to the desired surface without touching an adhesive surface can be applied to various different label constructions, as will now be described. In particular, it can be applied to compact disc labels, which are circular and have a circular opening. As described herein, the circular opening can be a full-face type of (narrow) opening corresponding to the diameter of the center opening of the disc or can be a standard diameter such as 1 5/8 inch. The circular label itself will have a diameter corresponding to the diameter of the compact disc and may be 4 1/2 inches, as an example. The label assembly can have one or preferably two diametrically opposed tabs extending out from the label and attached thereto. The label assemblies are formed on a sheet having a facestock sheet releasably adhered to a liner sheet. The label assembly is formed by weakened separation lines (die-cut, perforated, scored and other) in the facestock sheet and/or the liner sheet. The various arrangements thereof will be described in detail now with reference to the accompanying drawings.

**[00118]** After the sheet has been passed through a printer or copier and the desired indicia printed on the label portions of the sheet, so that the desired indicia is printed on the label portions of the sheets, the tabs are then pushed or pulled up and grasped with a portion of the liner (liner patch) being adhered to the facestock portion of the tab and the label assembly then peeled off of the sheet. The user can then grasp the other opposing tab, which similarly has a liner sheet portion on its back side (alternatively, he can grasp and pull both tabs at the same time). By grasping the two tabs and the liner sheet portions thereof, the user does not contact any adhesive surface. However, he can position the label directly on the desired surface.

**[00119]** Alternatively, he can position the label assembly on a label applicator device. According to a preferred embodiment, the label assembly is positioned with the adhesive side of the label facing up, the tabs hooked into place, and the CD is then pressed down on a center post of the device into contact with the label for adherence thereto. The CD with the label assembly adhered thereto can be removed from the device and the tabs torn off from the label. Preferably, weakened separation lines provide the tearing lines for the tabs. These are preferably perforated lines passing through the facestock sheet.

**[00120]** Referring to FIG. 33, a sheet of the present invention is shown generally at 800. It includes two side-by-side label assemblies 804, 808. The label assemblies are identical except that one is rotated one hundred and eighty degrees relative to the other one. Both include circular labels 820, with the outside circumferences defined by die-cut lines 824 through the facestock sheet around the entire perimeter except for the two portions 830, 834 adjacent the tabs 840, 844. Those arcuate lines 830, 834 are formed by perforated lines extending through both the facestock sheet and the liner sheet. The center hole 850 is formed by a die-cut line, and the hole can either be a full face (small) hole or a standard larger hole. The tab portions of the label assemblies, as is shown in FIGS. 34-37, are formed by die-cut lines having ties and cuts 860 through the facestock sheet. All of the tabs have liner sheet patches 866 formed by cut and/or perforated lines 870 through the liner sheet on their back sides. The liner sheet patches have generally the same size and shape as the facestock portion but with slightly smaller dimensions. Each of the tabs has a pair of opposing side notches 890. These notches are provided to help position and hold the labels in place in label applicator devices, as will be shown and discussed later in this disclosure. The notches can have a central tie portion.

**[00121]** Crescent-shaped areas 900 are preferably formed by die-cut lines through the liner sheet at the ends of one of the two tabs of each of the label assemblies. The label sheet has cut lines through the facestock sheet, forming a matrix 910 of horizontal and vertical lanes 914, 918 outside of the label assemblies. The crescent patches are attached to this matrix. Thus, the

facestock matrix can be pulled off of the sheet before the label sheet is packaged and marketed to the user. This matrix 910 then will pull off the crescent-shaped portions 900 of the liner sheet attached thereto. This leaves crescent-shaped through-holes through the label sheet (and the facestock sheet). The through-holes allow the user to insert the tip of his finger from the top of the label sheet, in through the holes to engage the distal ends of one of the tabs and to pull the tab up, grasp and pull the tab, thereby peeling the label assembly 804 (or 808) off of the sheet 800. In other words, the crescent-shaped holes allow the user to easily engage and pull up on the ends of the tabs 840.

**[00122]** Also, die-cut into the face sheet are a plurality of elongate spine labels 930. Eight are shown in the embodiment of FIG. 33. These labels are also conveniently printed in the printer or copier with the user's custom-designed indicia. They are similarly peeled off and applied to the spines of the jewel cases or other storage boxes for the labeled CDs, by the user.

**[00123]** FIG. 38 shows generally at 950 a label sheet of the invention which is a variation of the label sheet of FIG. 33. This label sheet 950 is illustrated as provided to the user and after the user has passed it through a printer or copier to have desired indicia 954 printed thereon. It is seen for this embodiment that the crescent-shaped openings 960 are provided for both tabs 970 of each label 974 of each label assembly 980, 984. In contrast, the embodiment of FIG. 33 only provides the crescent-shaped opening for one of the tabs of each of the label assemblies. Another difference is that only four spine labels 990 are provided. A further difference is the configuration of the removable facestock matrix 1000. As discussed above, when this matrix is removed, the crescent-shaped liner sheet portions are removed therewith to form the openings 960. This is an easy way to remove the crescent-shaped sheet portions without having excess small waste pieces produced. That is, it is a much cleaner and more efficient way of removing the crescent-shaped pieces than simply punching them out.

**[00124]** FIG. 39 shows an enlarged view of one of the tabs of the sheet of FIG. 38. It shows the face-cut line 1010 only in the circumference of the label, the

microperforation arcuate line 1014 through the facestock sheet. The liner-patch die-cut line 1018 is cut through the liner sheet from the liner side. The sides 1022 of the tabs, which are cut to form ties 1026, are cut through the facestock sheet and the liner sheet from the face side. The corners 1030 are cut through the liner from the liner side, and the crescent-shaped hole 960 is cut through the liner. The side edges 1040, 1050 of the face matrix are cut through the facestock sheet. When the face matrix is removed, the crescent-shaped portion of the cut liner, which is adhered thereto with the sheet adhesive, is pulled off and removed with the face matrix 1000 to form the crescent-shaped hole at the end of each of the tabs. For this embodiment, the liner sheet patch 1060 on the rear side of the tabs 970 is the same size as the facestock sheet (front) portion of the tabs.

**[00125]** Referring to FIG. 38, after the printing operation as shown thereon, the user inserts his finger into either one of the crescent-shaped openings 960 for one of the label assemblies 980 or 984 and pulls up on the label assembly, grasping the tab 970 from the front and back and peels the label and opposing tab off of the underlying liner sheet, and the user grasps the opposing tab on both sides thereof between the fingers of his other hand. The label assembly 980 is then as depicted in FIG. 40, ready for insertion on a label applicator device. (Referring to FIG. 40, the solid arcs on the tabs are liner cuts and technically are not visible in the top view.)

**[00126]** FIG. 41 is a perspective view of a label applicator device shown generally at 1100 with a label assembly 1110 of the present invention in position thereon. It can be seen that the label assembly 1110 is fitted via its central hole onto the central post assembly 1120. The label assembly is held on the soft curved support surface 1130 of the device, adhesive side 1140 up, by the positioning of the tab notches 1144 of the tabs 1148 onto the upright device pins 1150. With the label assembly so positioned the CD 1170 is positioned on the center post 1120 as shown in FIG. 41a and pressed down onto the label assembly 1100, effectively adhering the label to the disc. That is, the CD 1170 is shown in FIG. 41a in a rest position on the post assembly, ready to be manually pressed down onto the

adhesive surface of the label assembly 1170. (The hole in CD 1170 should preferably be illustrated as smaller so as to have a closer fit to the central post.)

**[00127]** FIG. 42 shows the label applicator device 1100 with the post assembly 1120 raised so that the raised pegs of posts 1160 define a large opening 1164 for a large or regular opening label assembly, as depicted. The raised center pegs 1160 position the center opening of the label and the tabs 1148 are held in place by the pins 1150 engaging in the side notches of the tabs.

**[00128]** An alternative applicator device 1200 where, instead of notches in the sides of the tabs, the tabs 1208 have center slots or holes 1212 is shown in FIG. 43. These slots or holes 1212 are then positioned on the posts 1220 of the applicator. While the small hole opening 1230 for the embodiment of the label assembly 1240 is shown, this arrangement can also be used for the regular size opening by raising the post assembly as depicted in FIG. 42.

**[00129]** The notch embodiment is preferred over the central hole embodiment (FIG. 43), which may require that the user punch or push out the center dot piece from the tab 1208 to form hole 1212. Also, because it is easier for the user to see the side pins 1150 instead of a central pin 1220, application of the tabs to the device is easier. The pins in either embodiment can keep the label assembly flat during application, minimizing the possibility of creating bubbles. If bubbles are created, they can be squeezed out without forming wrinkles. Additionally, the tabs can be provided with both side notches and central slots to fit on either device.

**[00130]** FIGS. 44 and 45 show an alternative label applicator device 1260 which has a different shape and slightly different operation, while employing the same function as the above-described devices, in that as the CD is pressed down, the entire applicator device is compressed down against a return bias. The return bias can be provided by the engineered plastic material of the device and/or by leaf or other springs attached to the bottom surface of the device. The longitudinal curving top surface helps position the label assembly and more effectively apply the label to the CD without wrinkling or bubbles. The label

assembly 1270 shown in FIGS. 44 and 45 is a regular size opening label 1280. In contrast, the label assembly of FIGS. 46 and 46a is a small hole label 1290.

**[00131]** FIG. 47 shows an alternative label sheet 1300 where instead of the crescent-shaped opening, a push tab 1310 is formed at the end of one or both of the tabs 1320 of each of the label assemblies. The tab is cut through both the face and the liner around a substantial portion of the perimeter 1330 and the end 1340 of the push tab is cut with a perforated or similar line through the face and/or liner. Spine labels 1350 can also be provided cut into the facestock sheet. The periphery 1360 of the labels 1370 can be die-cut except at arc 1374. And the liner can be cut at line 1378.

**[00132]** FIG. 48 shows an alternative sheet embodiment 1400 where the CD label assembly is located symmetrically on the sheet. Tabs 1410 on either side of the label 1420 are formed. The liner section 1420 of the tab is directly underneath the facestock portion 1430 of the tab so that by pushing the liner section, the facestock section partially separates from the sheet. The facestock section 1430 is attached to the compact disc label 1420 by perforations 1440. Lifting the facestock portion of the tab with the attached liner section of the tab lifts the compact disc label 1420 from the liner sheet. The opposed tab with its liner section can be lifted prior to the removal of the compact disc label 1420 or it can be left in and will pull the section of the opposite tab up during removal.

**[00133]** Referring to FIG. 49, an alternative label sheet embodiment is shown generally at 1500 wherein the alignment tab 1510, which is a perforation cut through both the facestock and the release liner and is separated by a liner cut 1520, is removed along with the (compact disc) label 1524. The tab 1530 is attached to the compact disc label 1524 by a perforation line 1540, and the tab liner section 1544. This label assembly can be handled without contacting the adhesive-coated surface. The alignment tab 1510 can then be used to align the label with the compact disc using the contours of the compact disc jewel case in accordance with U.S. Patent No. 5,715,934, incorporated herein.

**[00134]** This concept incorporates a mirror image of the "hat" concept that is currently used for Laser, Inkjet, and Color Laser CD labels. One purpose of having the second "hat" is to allow users to punch out the "hats" from behind and remove the CD label. A portion of the label (the middle area) has exposed adhesive, while the remainder of the assembly is still in laminate form. The idea is to place this assembly upside down on a CD applicator and peel back both "hats" simultaneously, so that equal force is applied in opposite directions as the liner sections of the "hats" are removed from the CD label. This allows the CD label to be relatively undisturbed on the applicator while the liner is being removed, with the end goal of having the CD label adhesive side up, with all of the adhesive exposed, never having contacted the adhesive directly with either hand. The CD can then be placed on top of the CD label in the applicator and applied thereto.

**[00135]** An alternate use of this concept would be to use the jewel case as an alignment tool and utilize it as existing CD labels are used. The first "hat" would be positioned into the appropriate corners of the jewel case, the exposed area of the label would be applied to the CD, and then the "hats" would be removed sequentially or simultaneously. Again, the user would not need to contact an adhesive coated surface during this label application process.

**[00136]** FIGS. 50 and 51 show label assemblies used for business card CD's. The label portion 1550 of the label assembly 1560 of FIG. 50 has rounded ends while the label 1570 of the assembly 1580 of FIG. 51 has square corners 1584, and both have center holes 1590. These different configurations are provided to accommodate and fit on different configurations of business card CD's. It is noted that both of the label assemblies of FIGS. 50 and 51 have the no-touch tabs 1600 with notches 1610 and with the liner sheet portion or patch on the back side of the tabs so the user advantageously does not grasp an adhesive surface. These tabs have notches to fit onto centering pegs of label applicator devices, as previously described, or adapted to accommodate CD business cards. Alternatively, they can have central slots or holes. A further embodiment would be to omit any

notches or holes. These labels can be shaped to match a variety of business card CD types, as would be apparent to those skilled in the art.

**[00137]** The label sheet 1630 of FIG. 52 is used to provide printed or non-printed jewel case inserts together with the CD label assemblies. The jewel case insert shown at the top of the sheet at 1640 is a 4.875 by 4.875 inch square. It is defined by microperforations 1650 through both the face sheet and the liner sheet, with 0.0625 inch offsets 1660. The face and backing are both permanent laminations so that they feel like a regular card. In other words, the area 1640 does not have a silicone coating, while the rest of the sheet does have a silicone coating. The tabs 1670 of the single label assembly 1680 both have the cut liner portions 1684 secured to their rear surfaces as previously discussed so that the user does not contact adhesive surface while handling the tabs. Microperfs 1688 in the face sheet separate the tabs from the labels 1690. The center holes 1696 in the labels can be either full face or regular size openings. One or more spine strips can also be provided on the sheet 1630.

**[00138]** FIG. 54 shows generally at 1700 an address label embodiment after removal from a label sheet. The top and side tabs 1710, 1714 with liner sheet patches on their back sides are used to align the label 1720 correctly to an envelope (not shown) and then are torn off along their perforation lines 1734. This leaves the adhesive printed or non-printed label correctly positioned and adhered to the envelope.

**[00139]** A license plate label assembly 1750 having a pair of no-touch tabs 1760, 1764 extending out from the label 1770 is shown in FIG. 54. These tabs 1760, 1764 are aligned to the edge of the license plate, the label 1770 applied and the tabs removed in a process similar to that described with respect to other embodiments herein.

**[00140]** Referring in particular to FIGS. 55 and 56, another embodiment of the present invention is illustrated generally at 1800. Referring thereto it similarly includes two labels 1804, 1808, each with diametrically opposed tabs 1812, 1816; a weakened line 1820, such as a perforated line, extends through both the

facestock 1830 and the liner 1834 separating the sheet into two generally equal portions with a label on each portion. A small circular portion 1850 is cut at the center of the label. Each portion similarly includes a strip 1850, 1854 including a pair of case spine labels 1860, 1864.

**[00141]** The tabs can have "ties" away from the label to insure that the tabs remain flat while passing through desktop printers. In other words, the backing (liner sheet) can be perfed along some portions of the cut, while being cut through in other portions. As described and illustrated in detail elsewhere in this disclosure, the tabs are used for handling (guiding and placement) of the label during application thereof. The tab side notches are used to accurately secure the label to the applicator device as illustrated in FIGS. 41 and 41a. Patches 1868 are cut on the liner sheet, as shown in dotted lines in FIG. 55 and solid lines in FIG. 56.

**[00142]** On the right side of the sheet extending the length is a facestock strip 1870 having thereon printed label application instructions 1874. Crescent shaped openings 1878 are provided. Other indicia can be printed on the facestock of the label as well as on the back of the liner. For example, the printed indicia on the back of the liner can be the logo of the manufacturer or distributor. The printed arrows 1880 at the top end of the sheet indicate the feed direction for the sheet into the printer or copier. Alternatively, no printing or other indicia can be provided on the sheet construction. The liner extends a short distance out from the perimeter of the facestock, as discussed in greater detail elsewhere in this disclosure.

**[00143]** Three variations of this embodiment are illustrated in the drawings. FIG. 55 illustrates a paper facestock sheet embodiment; FIG. 57 illustrates a MYLAR facestock sheet embodiment 1900; and FIG. 58 illustrates a transparent facestock sheet embodiment 1902. While the crescent shaped holes 1878 of the embodiments of FIGS. 57 and 58 are flattened at 1904 and abut the adjacent instruction facestock strip, the holes of the embodiment of FIG. 55 are rounded and spaced from this strip. The configuration of FIGS. 57 and 58 is provided

because if the matrix is too wide for the MYLAR and foil stock embodiments printer error can result. Narrowing the matrix allows the full width of the sheet to be sensed and printed.

**[00144]** The paper facestock of the label sheet construction of FIG. 56 can be thirty to seventy pounds per ream and between two and six mils thick. The polyester film or MYLAR can either just be clear or it can be metallized smooth to form a high gloss smooth metallized film. Alternatively, it can be embossed with a holographic film. This film can be between 1.5 and three mils with a preferred thickness being two mils, not including the inkjet printable top coating. The metallic labels can use a paper/foil laminate, which also can be two to six mils thick.

**[00145]** The paper label can be used for most types of label printing. It can have a matte finish or a smooth, photo glossy finish. Although the matte labels may or may not have an inkjet receptive coating, the glossy labels generally must have an inkjet receptive top coating according to a preferred embodiment. The foil/paper laminate labels (metallic) are used when a higher end or unique look to the CDs is desired as can be provided by the metallic facestock. Further, a metallic label using plain clear polyester film with metallic undercoat can be used.

**[00146]** The holographic laminate labels (clear polyester embossed on the backside with a holographic pattern and metallized) are for users who want a higher end or unique look to their CDs that is provided by the holographic facestock.

**[00147]** The clear polyester labels are provided for users who want a higher end or unique look to their CDs that is afforded by the clear facestock, which will nearly disappear and will give an effect similar to printing directly on the CD. This is how most professional and mass produced CDs are given their graphic presentation.

**[00148]** The label sheet constructions of FIGS. 55-59, for example, are preferably produced on a "converting press," pursuant to the following steps.

**[00149]** a. A facestock/adhesive/silicon coated liner laminate is placed in roll form on the unwind of the converting press.

**[00150]** b. The laminate material or web is fed through a series of rollers in the converting press whereby the material passes by a web guide that aligns the material in the press. It then passes through a printing station that may or may not print text and/or graphics on one side of the web material. The web then may or may not pass through a device such as a "turnbar," that turns the web over. The web then passes through a second print station that may or may not print on the other side of the web.

**[00151]** c. The web may or may not be inverted by a series of idler rollers. The web next passes through the die station in order to make die cuts in the liner. The die station includes a steel roller (an "anvil roll"), which is smooth, highly concentric, and very flat in the cross machine direction, and a rotary die, which is a steel cylinder with a flat cylindrical surface on either side ("bearers") and a pattern of sharp blades across the middle and around the circumference of the die (corresponding to where the liner of the label sheet has cuts). The die is positioned either directly above or directly below the anvil roll, and the die comes in contact with the anvil roll at the bearers on either side of the die. The blades are made such that they are a distance away from the anvil roll that corresponds to a percentage of the facestock thickness (typically about 70%). As a result, when the web passes between the anvil roll and the die (the bearers are on either side of the web and do not touch the web), the blades cut through the liner and the adhesive and press against the face stock (which is slightly compressible), but do not cut through the facestock.

**[00152]** Two alternative roller-die liner cutting arrangements are shown generally at 1950 and 1960 in FIGS. 70 and 71, respectively. Arrangement 1950 includes for the laminate web 1970 a liner die 1974, a first idler roller 1978, a second idler roller, 1982, a mini anvil 1984 and a face die 1988. Referring to FIG. 71, arrangement 1960 includes a liner die 1992, a standard anvil 1994, and a face die 1996 for the laminate web 1998.

**[00153]** d. The web may or may not be inverted by another series of idler rollers. The web then passes through an additional die station to make the die cuts in the face material.

**[00154]** e. The web then may pass through a matrix removal area, wherein a portion of the face material is removed from the web by pulling a portion of the face material away from the web and around one or more rollers or fixed bars, after which it is either wound up into a roll or transported by vacuum into a waste container. Alternatively, the matrix can be removed immediately at the face material die station. The die cut sections of liner that are directly and wholly underneath the facestock material that is removed will be adhesively bonded to the face material and will also be removed with the face material, leaving a hole through the liner in that location.

**[00155]** f. The web then goes into a cutoff or "sheeter" station that has a die and anvil. The die contains a single continuous cross machine blade (usually the blade is removable and can be easily replaced) which contacts the anvil roll on each revolution, and thereby cuts the web into individual sheets.

**[00156]** g. The sheets then are transported by belts and pulleys away from the sheeter station and are stacked either by allowing them to fall one upon another in a continuous stream or by feeding them into wheels ("starwheels") that have spiral shaped cuts that receive and decelerate the sheets, which turn as the sheets are received. In the latter design, there are fixed posts between the starwheels, whereby the sheets hit the posts and are stripped out of the starwheels and drop into a vertical stack. This vertical stack is then ejected on a periodic basis and fed onto secondary conveyor belts, where they are either removed for hand packing or fed into a secondary packaging machine, which places the product into packets or boxes.

**[00157]** The steps of the process described above can be depicted or embodied in a system such as shown in block form generally at 2000 in FIG. 69. The system 2000 includes the following stations: web roll 2004, a printing station 2006, a liner cutting station 2008, a facestock cutting station 2012, a matrix removal

station 2016, a web sheeting station 2020, a stacking station 2024 and a packing station 2028.

**[00158]** Other manufacturing processes as would be apparent to those skilled in the art from this disclosure are also within the scope of the present invention and included herein. For example, the ordering of the steps or stations can be changed, such as the facestock cutting station being before the liner cutting station. Or stations, such as the printing station, eliminated. The process can be varied as would be apparent to those skilled in the art from other manufacturing disclosures in this document.

**[00159]** The user designs on his personal computer the indicia to be printed on the label portions of the labels, as previously described. The label sheet constructions 2034 are then fed into a printer or copier, such as shown generally at 2040 in FIG. 60, and the desired indicia 2048 printed on the labels. Alternatively, the label sheet constructions can be separated along their weakened center line 1820 to divide the sheets into two portions 2050. And the portions 2050 fed into the printer 2040 as depicted in FIG. 61.

**[00160]** After the printing, the user 2058 grasps the end of the tab using the crescent shaped hole and the patch and peels the label and two tabs off of the sheet, as shown in FIG. 63. Holding the two tabs and patches in his right and left hands, the label is moved into position on the CD label applicator device (as previously described) or directly on the CD. With the printed label subsequently adhesively adhered to the non-data side of the CD, the tabs are torn off along the perforated edges.

**[00161]** The spine labels on the label sheet construction can also be printed by the user by his printer with custom indicia 2060. The printed spine label 2064 is then peeled off of the underlying liner. And the user 2068 applies the removed label 2072 with printed indicia 2074 to the spine 2078 of a jewel case 2082.

**[00162]** A further label sheet construction of the present invention is illustrated generally in FIGS. 64 and 65 at 2100. It is seen therein to include two label assemblies 2110, 2114, both including a pair of diametrically opposed tabs 2120,

2124 and a center smaller opening 2128. (Alternatively, it can also include the spine labels and/or instruction strip as in prior embodiments.) Similar to other embodiments disclosed herein, the facestock sheet 2130 is slightly smaller in both length and width directions than the underlying liner sheet 2134. This thereby provides a outwardly-extending liner sheet perimeter 2140 of about generally 1/16 to 1/8 of an inch. This perimeter 2140 makes the sheet construction perimeter thinner providing flexibility for more dependable feeding into the printer. For the previously described embodiments that have the matrix (which is removed at the matrix removal station) the facestock strips which are removed to define the perimeter add strength to the facestock matrix which is removed therefrom. Further, by stripping away the leading edge of the facestock sheet, adhesive is prevented from being squeezed out from the label sheet construction and oozing onto and building up in the printer, thereby preventing the undesirable "adhesive buildup."

**[00163]** The embodiment 2100 of FIGS. 64 and 65 also include a liner sheet patches 2140, 2144 die cut underneath the facestock sheet tabs 2148, 2152. These patches 2140, 2144 are slightly smaller in dimension along three of their edges than the overlying tabs. However, unlike the previously described embodiments, these patches 2140, 2144 extend a slight distance 2156 of about 1/8 inch onto the backside of the label itself. This allows the cut lines 2160, 2166 separating the tab from the perimeter of the circular label to be completely die cut without any "ties." This is because the portion of the patch underlying the label holds the tab to the label during the label removal process and the application of the label onto a label applicator device or manually onto the label itself. This is shown in FIGS. 66 and 67.

**[00164]** Thereby to remove the tab 2148 from the label after the label has been applied onto the non-data side 2170 of the optical disc 2174, such as CD or DVD, the tab with patch 2140 is simply pulled away from the label and the patch pulled out and away from between the label and the optical disc as indicated by arrow 2178. In other words, by using a clean scored line 2160 to separate the tab from the label a very clean circular edge around the entire perimeter of the label is

provided. In contrast, in the prior embodiments there may be ties left over after the tabs are removed from the label providing a slightly (but only slightly perceptible) rough edge.

**[00165]** Although the adhesive facestock and adhesive can be very different from one embodiment of the label sheet construction to another, an important aspect of the above-described invention is that the release value equal the adhesion of the facestock the liner, by means of the adhesive. Given the wide range of different constructions including a certain variation of release values from product to product, the manufacturer can make sure that the small overlapping areas of the tabs are wide enough to enable the removal of the label from the liner together with the tab. If the release value and/or the overlapping area is too small, the CD label will not be able to be removed by means of grasping and pulling on the tabs. On the other hand, the overlapping area has to be small as possible to enable the removal of the tabs after the application of the CD label by means of the CD label applicator, again referring to FIGS. 67 and 68. If this area and/or the release value is too high, the liner will split and remain under the applied label when removing the tabs, and this would be unacceptable for a professional CD labeling. The preferred release value is 30 cN  $\pm$  10 (FTM3, 180°, 300 mm/Min). The preferred dimension of the overlapping area will be 4 mm  $\pm$  2 mm by 19 mm  $\pm$  1 mm.

**[00166]** Three different constructions and preferred materials are described below.

**[00167]** 1. Uncoated paper for laser: uncoated paper facestock ninety  $\mu$ m, seventy gsm; Kraft liner white fifty-five  $\mu$ m, fifty gsm; permanent adhesive, coatweight twenty gsm; and caliper of total construction: one hundred fifty-five  $\mu$ m. (In order to have a high opacity of the CD-label, the backside of the facestock may have a backprint or the adhesive may be colored.)

**[00168]** 2. Glossy paper for inkjet (photo quality): claycoated paper facestock, eight-five gsm; backing liner eighty gsm; coatweight of adhesive eighteen gsm.

(In order to have a high opacity, the grammage of the facestock may be one hundred twenty-five gsm.)

**[00169]** 3. Filmic construction for inkjet: metallic silver PET film, ninety  $\mu\text{m}$ , one hundred thirty-eight gsm (or a fifty  $\mu\text{m}$  version); backing liner, ninety-two  $\mu\text{m}$ , ninety gsm; permanent adhesive, coatweight twenty gsm; and total grammage two hundred thirty gsm.

**[00170]** From the foregoing detailed description, it will be evident that there are a number of changes, adaptations and modifications of the present invention which come within the province of those skilled in the art. For example, the labels, instead of being passed through a printer or copier, are written directly thereon by a pencil, pen or the like, or the labels are provided on the sheet with the indicia pre-printed. Or the labels can be unprinted color coded labels. Another alternative is for the labels when on the sheet to not have adhesive thereon but rather to be detached or removed and then attached to an adhesive surface. While one preferred embodiment uses a clear glossy polyester (or film) facestock, an adhesive layer and a paper liner, other materials can be used. The scope of this invention includes any combination of the elements from the different species or embodiments disclosed herein, as would be within the skill in the art. However, it is intended that all such variations not departing from the spirit of the invention be considered as within the scope thereof.

**WE CLAIM:**

1. A label sheet construction, comprising:
  - a liner sheet;
  - a facestock sheet releasably adhered with adhesive to the liner sheet;
  - at least one weakened facestock separation line through the facestock sheet to the liner sheet to define a facestock sheet label;
  - at least one tab weakened line through the facestock sheet to form at least in substantial part a facestock sheet tab extending out from the label;
  - the liner sheet includes at least one weakened line through the liner sheet to the facestock sheet and defining a liner sheet patch on a back side of the tab;
  - the tab and patch together defining a handle which a user can grasp without grasping the adhesive to remove the label from the liner sheet and to assist in positioning the label on a desired surface to an adhered position thereon using the adhesive; and
  - the tab and patch being removable from the label along the at least one tab weakened line with the label in the adhered position.
2. The construction of claim 1 wherein the patch extends a slight distance onto an edge of the label.
3. The construction of claim 2 wherein the slight distance is approximately 1/8 inch.
4. The construction of claim 2 wherein the at least one weakened facestock separation line includes a die cut line completely separating the tab from the label.
5. The construction of claim 2 wherein at least one tab weakened line includes cuts and ties in the face sheet to form the tab.

6. The construction of claim 1 wherein the tab has a central through-hole.

7. The construction of claim 1 wherein the tab has opposing side edge notches.

8. The construction of claim 1 wherein the facestock sheet label defines a facestock sheet first label, the at least one weakened facestock separation line defines an at least one first weakened facestock separation line and the tab defines a first tab, and further comprising at least one second weakened facestock separation line through the facestock sheet to define a facestock sheet second label and at least one tab weakened line through the facestock sheet to define a second tab extending out from the second label.

9. The construction of claim 8 wherein the first and second labels are both circular compact disc labels.

10. The construction of claim 8 wherein the first and second labels include respective central holes to correspond to central holes of compact discs to which they are adhered.

11. The construction of claim 8 wherein the patch defines a first patch, and the liner sheet includes at least one weakened line through the liner sheet to the facestock sheet and defining a second patch on a back side of the second tab.

12. The construction of claim 8 further comprising a side-to-side weakened separation line through both the liner sheet and the facestock sheet with the first and second labels being positioned on opposite sides of the side-to-side weakened separation line whereby the sheet can be separated into first and second smaller sheets each with a label thereon.

13. The construction of claim 12 wherein the facestock sheet includes weakened separation lines to form a first jewel case spine label on the first smaller sheet and a second jewel case spine label on the second smaller sheet.

14. The construction of claim 1 wherein the liner sheet has length and width dimensions slightly larger than that of the facestock sheet such that a thin perimeter of liner sheet extends out beyond perimeter edges of the facestock sheet.

15. The construction of claim 14 wherein the thin perimeter is approximately 1/8 inch wide.

16. The construction of claim 1 wherein the desired surface is on a compact disc.

16. The construction of claim 15 wherein the label has a central hole to correspond to and surround a central hole of the compact disc.

17. The construction of claim 1 wherein the at least one weakened facestock separation line is a die cut line.

18. The construction of claim 1 wherein the surface is a CD and/or DVD type optical disc.

19. The construction of claim 1 wherein the patch has dimensions and a shape approximating that of the tab.

20. The construction of claim 1 wherein the patch has dimensions slightly smaller than that of the tab.

21. The construction of claim 1 wherein the patch is entirely outside of the label.

22. The construction of claim 1 wherein the patch is shaped to follow an outline of the tab but inside of and slightly smaller than that of the tab.

23. The construction of claim 1 wherein the liner sheet has a thickness of between 2.5 and 4.5 mils.

24. The construction of claim 1 wherein the facestock sheet is paper which is 30-70 pounds/ream and has a thickness of between two and six mils.

25. The construction of claim 1 wherein the facestock sheet is a polyester film.

26. The construction of claim 25 wherein the polyester film is clear.

27. The construction of claim 25 wherein the polyester film is metallized.

28. The construction of claim 25 wherein the polyester film is a high gloss smooth metallized film.

29. The construction of claim 25 wherein the polyester film is embossed with a holographic pattern.

30. The construction of claim 25 wherein the polyester film has a thickness between 1.5 and 3 mils, plus thickness of any inkjet printable topcoating.

31. The construction of claim 1 wherein the facestock sheet is a paper sheet.

32. The construction of claim 31 wherein the paper sheet has a matte finish.

33. The construction of claim 32 wherein the matte finish paper sheet has an inkjet receptive topcoating.

34. The construction of claim 1 wherein the paper 31 sheet has a smooth, photo glossy finish.

35. The construction of claim 31 wherein the paper sheet has an inkjet receptive topcoating.

36. The construction of claim 1 wherein the facestock sheet includes a plain clear polyester film with a metallic undercoat.

37. The construction of claim 1 wherein the facestock sheet includes a clear polyester sheet embossed on a back side thereof with a holographic pattern and metallized.

38. The construction of claim 1 wherein the at least one weakened line through the liner sheet is a die cut line.

39. The construction of claim 1 wherein the at least one weakened facestock separation line defines a single cut line.

40. The construction of claim 1 wherein the at least one cut line includes a die cut line.

41. The construction of claim 1 wherein the label is rectangular.

42. The construction of claim 41 wherein the surface is a media stick.

43. The construction of claim 41 wherein the surface is a flash memory media.

44. The construction of claim 41 wherein the tab extends out from an end of the rectangular label.

45. The construction of claim 44 wherein the tab defines a first tab, the end defines a first end, the at least one weakened line defines a second tab extending out from a second end of the rectangular label opposite to the first end.

46. The construction of claim 45 wherein the first tab has an opposing pair of side notches, and the second tab has an opposing pair of side notches.

47. The construction of claim 45 wherein the first and second tabs each have a central through-hole.

48. The construction of claim 1 wherein the label is circular.

49. The construction of claim 48 wherein the label has a center circular hole.

50. The construction of claim 49 wherein the hole has a diameter of 1-5/8 inch.

51. The construction of claim 35 wherein the hole has a diameter of .690 inch.

52. The construction of claim 48 wherein the label has a diameter of approximately 4.7 inches.

53. The construction of claim 1 wherein the label has a diameter of approximately 4.7 inches.

54. The construction of claim 1 further comprising a weakened separation line in the facestock sheet along which the tab is removable from the label.

55. The construction of claim 54 wherein the weakened separation line is a perforated line.

56. The construction of claim 1 wherein the liner sheet comprises a film sheet.

57. The construction of claim 1 further comprising a cut line through the facestock sheet to the liner sheet to define an elongate spine label having an adhesive back surface when removed from the liner sheet for securement to a storage case.

58. The construction of claim 57 wherein the surface is a surface of the compact disc and the storage case is a jewel case for the compact disc.

59. The construction of claim 1 further comprising a through-opening at a distal end of the tab and through the liner sheet and the facestock sheet.

60. The construction of claim 59 wherein the through-opening has a crescent shape.

61. The construction of claim 1 further comprising a weakened separation line through the liner sheet to form a liner patch on the backside of the tab and removable from the facestock sheet to assist a user in grasping the tab and removing the label from the liner sheet.

62. The construction of claim 61 further comprising at least one weakened separation line through the facestock sheet defining a facestock sheet portion separable from the liner sheet, at least a portion of the facestock sheet portion being coincident with the liner patch.

63. The construction of claim 62 wherein the facestock sheet portion is a part of a removable part matrix.

64. The construction of claim 62 wherein the liner sheet patch is adhered to the matrix and removable therewith from the liner sheet.

65. The construction of claim 64 wherein the tab defines a first tab, the facestock sheet portion defines a first separable facesheet portion, the liner patch defines a liner first patch, the liner sheet includes a liner second patch adjacent the second patch adjacent the second tab, and the matrix includes a second separable facesheet portion adjacent the liner second patch.

66. The construction of claim 65 wherein the liner first and second patches are adhered to the matrix and removable therewith from the liner sheet.

67. The construction of claim 66 wherein the matrix includes a facestock sheet longitudinal strip and a facestock sheet lateral strip engaging the longitudinal strip.

68. The construction of claim 67 wherein the lateral strip defines a first lateral strip, and the matrix includes a second lateral strip which engages the longitudinal strip.

69. The construction of claim 1 wherein the at least one weakened facestock separation line includes a perforation line through the facestock sheet and separating the tab from the label.

70. The construction of claim 69 wherein the liner sheet includes a cut line through the liner sheet spaced outward from the perforation line and on a backside of the tab.

71. The construction of claim 1 herein the at least one tab weakened line includes a perforated line through the facestock sheet and the liner sheet.

72. The construction of claim 71 wherein the perforated line defines at least in part a liner patch adhered to a backside of the tab and removable therewith.

73. The construction of claim 71 wherein the at least one tab weakened line includes a cut line through the liner sheet and the facestock sheet.

74. The construction of claim 1 further comprising a weakened separation line on the facestock sheet and defining a card with an adhesive back and separable from the sheet and adapted to be adhered to a jewel case.

75. The construction of claim 74 wherein the label assembly has a silicone face and the card has a non-silicone face.

76. The construction of claim 74 wherein the weakened separation line is a perforated line.

77. The construction of claim 74 wherein a weakened separation line through the facestock sheet defines a printable elongate spine label.

78. A label application method, comprising:  
providing a label assembly including a label having an adhesive surface and a tab extending out from the label;  
grasping the tab and manipulating the label into an adhered position on a desired surface; and  
with the labels in the adhered position, separating the tab from the label.

79. The method of claim 78 wherein the tab defines a first tab, the label assembly includes a second tab extending out from the label and the grasping includes grasping the second tab.

80. The method of claim 78 wherein the manipulating includes positioning the label on a label applicator device.

81. The method of claim 80 wherein the desired surface includes a compact disc, and the manipulating includes with the label in position adhesive side up on the label applicator device, pressing the compact disc down on the label.

82. The method of claim 81 wherein the tab has opposing side notches, and the positioning includes positioning the notches on pins of the label applicator device.

83. The method of claim 80 wherein the tab includes a central hole, and the positioning includes positioning the tab down on the pin of the label applicator device with the pin passing up through the central hole.

84. The method of claim 78 wherein the label assembly is formed on a facestock sheet which is adhered to a liner sheet, and the manipulating includes peeling the label assembly off of the liner sheet.

85. The method of claim 84 wherein the liner sheet has a weakened separation line defining a patch adhered to the tab, and the grasping includes grasping the patch.

86. The method of claim 84 wherein the patch extends a short distance under the label.

87. The method of claim 78 wherein the providing includes the label assembly being part of a label sheet, and before the grasping passing the label sheet through a printer or copier and printing desired indicia on the label.

88. The method of claim 87 wherein the grasping includes pulling the label assembly via a tab off of the label sheet.

89. The method of claim 88 wherein the pulling includes inserting a finger tip in a hole of the label sheet at an end of the tab and pulling up on the tab.

90. The method of claim 89 wherein the hole is crescent shaped.

91. The method of claim 88 wherein the label assembly includes a facestock sheet and a liner sheet adhered thereto, the label and the tab being formed by the facestock sheet, and a patch formed by the liner sheet, separable therefrom and on a backside of the tab.

92. A method of manufacturing a label sheet construction, comprising:  
providing a web which includes a facestock adhesively adhered to a liner;  
cutting the liner of the web to the facestock to form a pair of patches;  
cutting the facestock of the web to the liner to form a circular label, a small central label circle and a pair of diametrically opposed tabs abutting a perimeter of the circular label, extending out therefrom and separated therefrom with weakened separation lines;

wherein the patches are on back sides of respective ones of the tabs; and

after the cutting the liner and cutting the facestock, sheeting the web to form a label sheet construction which includes the patches, the circular label, the label circle and the pair of tabs;

wherein the label sheet construction is adapted so that one of the tabs together with the patch on the back thereof can be grasped to thereby peel the label, but not the label circle, off of the liner and the other of the tabs together with the patch on the back grasped and the label then maneuvered into an application position using the adhesive on the back side of the label on an optical disc and

the tabs, together with their patches, subsequently pulled off of the label on the weakened separation lines.

93. The method of claim 92 wherein the weakened separation lines are die cut lines without any ties.

94. The method of claim 92 wherein the weakened separation lines are perforated lines.

95. The method of claim 92 further comprising after the cutting the liner and cutting the facestock, removing a cut portion of the facestock adhered to a cut portion of the liner from the web to define a hole through the sheet adjacent the one of the tabs to assist the tab being grasped and the grasped tab separated from the liner.

96. The method of claim 95 wherein the cutting the facestock includes forming a matrix of connected facestock strips outside of the label and tabs and including the cut portion of the facestock, and re removing includes removing the matrix including the cut portion of the facestock and the cut portion of the liner adhered thereto.

97. The method of claim 96 wherein the removing the matrix is before the sheeting.

98. The method of claim 95 wherein the cutting the facestock and the liner forms for the sheet another label, another pair of tabs and another pair of patches, another cut portion of the facestock and another cut portion of the liner, the matrix includes the another cut portion of the facestock with another cut portion of the liner adhered thereto, and the removing the matrix includes removing the another cut portion of the facestock and the liner to form another hole adjacent one of the another tabs.

99. The method of claim 98 wherein the cutting the facestock and the liner forms a side-to-side extending perforation line for separating the sheet into a first sheet portion including the label and a second sheet portion including the another label.

100. The method of claim 99 wherein the first sheet portion includes a first spine label and the second sheet portion includes a second spine label.

101. The method of claim 92 wherein the cutting the facestock includes cutting through the facestock to the liner to form at least one spine label.

102. The method of claim 92 wherein the cutting the facestock includes cutting through the facestock to the liner to form an instruction panel.

103. The method of claim 102 further comprising before the sheeting, printing instruction indicia on the instruction panel.

104. The method of claim 103 wherein the printing is before the cutting the facestock and the cutting the liner.

105. The method of claim 92 further comprising printing indicia on the facestock before the cutting the facestock.

106. The method of claim 92 further comprising printing indicia on the liner before the cutting the liner.

107. The method of claim 92 wherein the patch extends a small distance on to the label.

108. The method of claim 92 wherein the cutting the liner is before the cutting the facestock.

109. The method of claim 92 further comprising after the cutting the liner and before the cutting the facestock, turning the web over.

110. The method of claim 92 further comprising before the sheeting, printing indicia on the web.

111. The method of claim 110 wherein the printing is before the cutting the liner and the cutting the facestock.

112. A system for manufacturing a label sheet construction, comprising:

a liner cutting station to which is delivered a web which includes a liner adhesively adhered to a facestock, and at which the liner is cut to the facestock to form a pair of patches;

a facestock cutting station at which the facestock of the web is cut to form a circular label, a small central label circle, and a pair of diametrically opposed tabs abutting a perimeter of the label, extending out therefrom and separated therefrom with weakened separation lines;

wherein the patches are on back sides of respective ones of the tabs; and

a web sheeting station at which the web is sheeted to form a label sheet construction which includes the label, the label circle and the tabs.

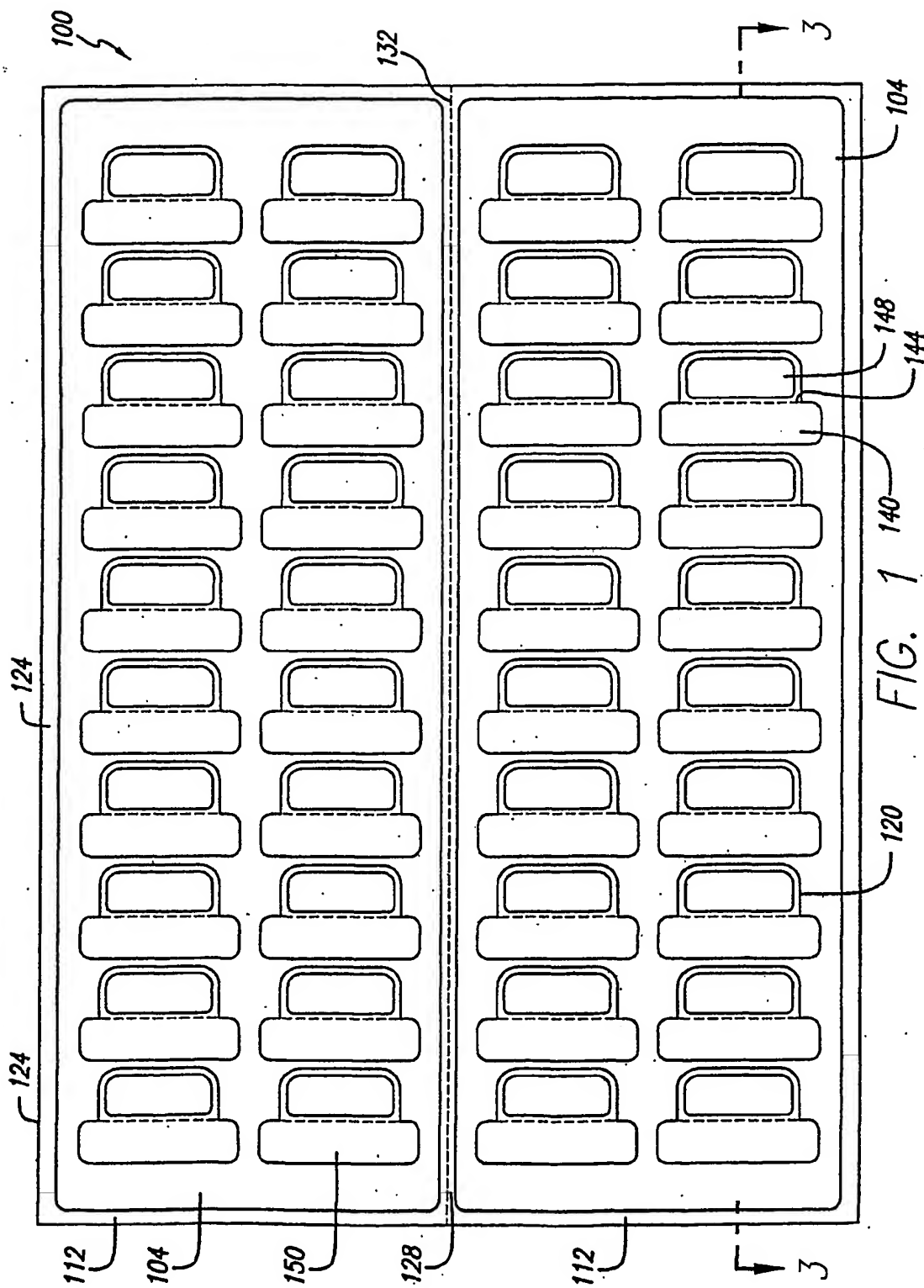
113. The system of claim 112 wherein the facestock cutting station cuts the facestock to form a continuous facestock matrix, and further comprising a matrix removal station at which the matrix is removed before the web is delivered to the web sheeting station.

114. The system of claim 113 wherein the facestock cutting station cuts the facestock to form a facestock piece adjacent one of the tabs, the liner cutting station cuts the liner to form a liner piece adhered to a backside of the facestock piece, the facestock piece forming part of the matrix, and wherein when the matrix is removed at the matrix removal station, both the facestock piece and the liner piece are removed to form a through-hole adjacent the one of the tabs for finger

grasping an edge of the tab to thereby remove the tabs and label from the label sheet construction.

115. The system of claim 112 wherein the matrix includes an outer facestock rectangle such that the label sheet construction includes the liner extending out a short distance about beyond the entire perimeter of the facestock.

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2/45

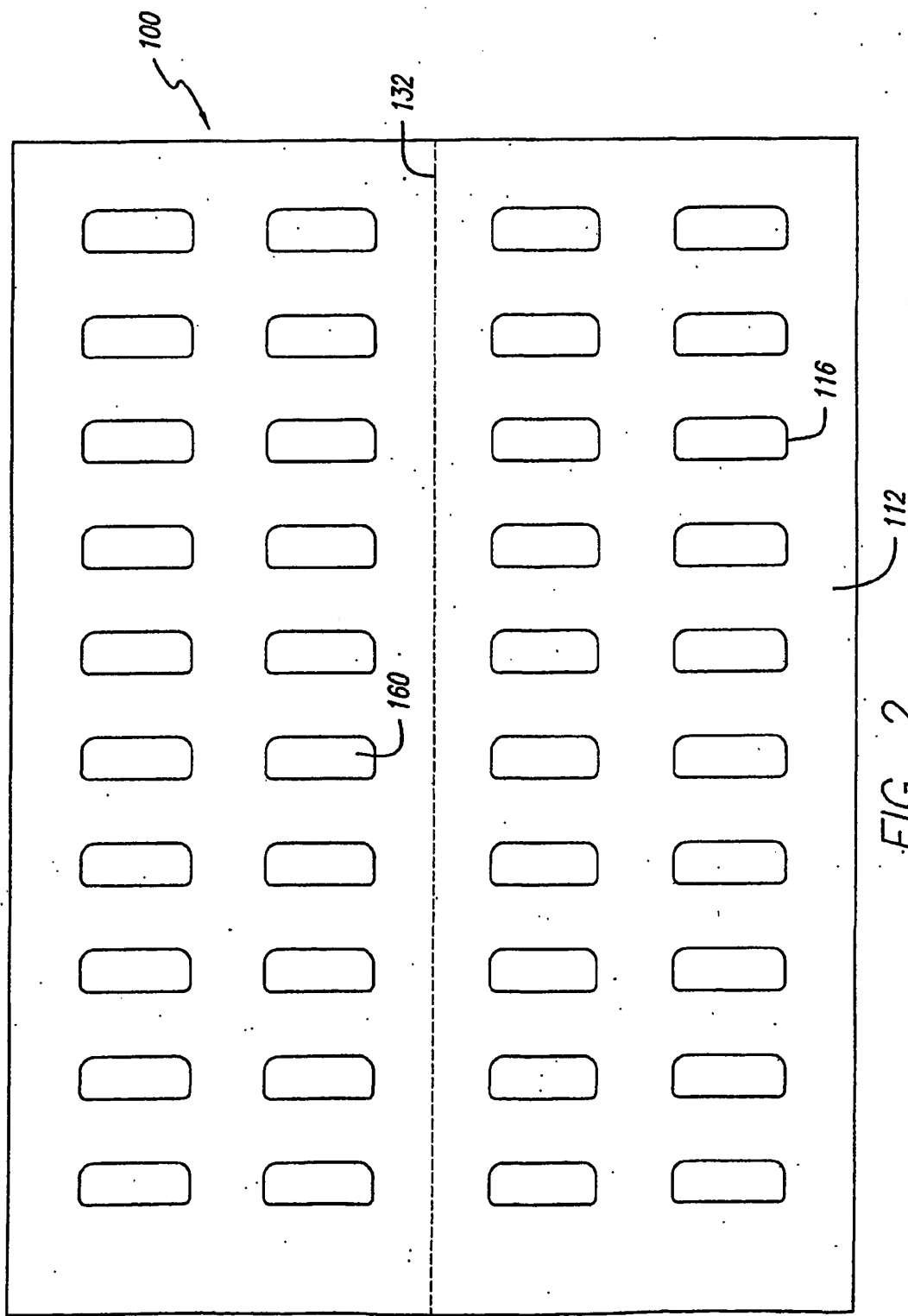


FIG. 2

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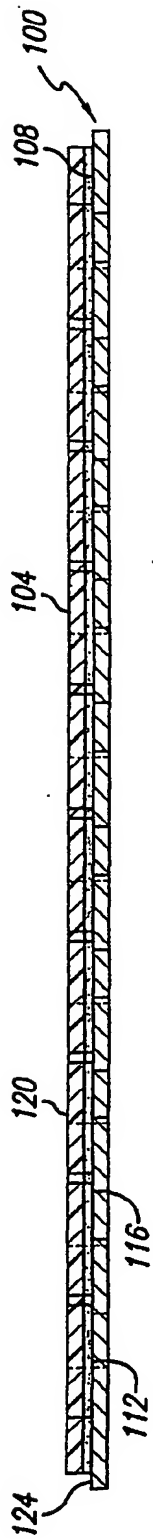


FIG. 3

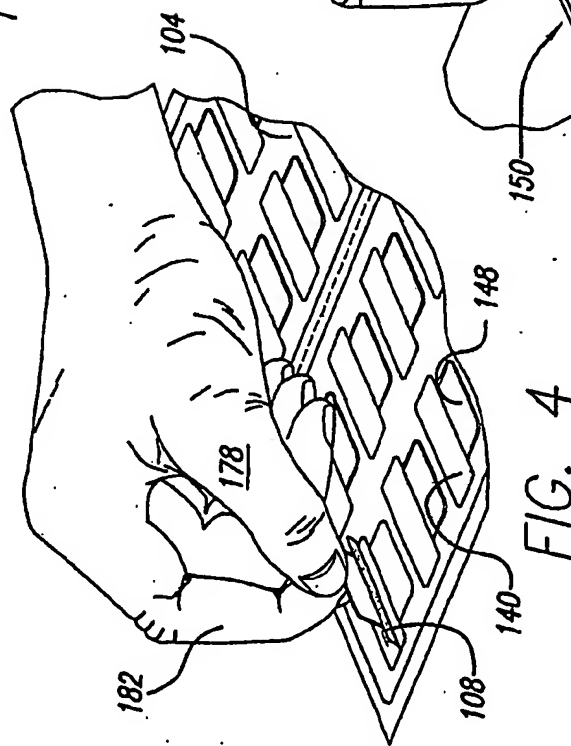


FIG. 4

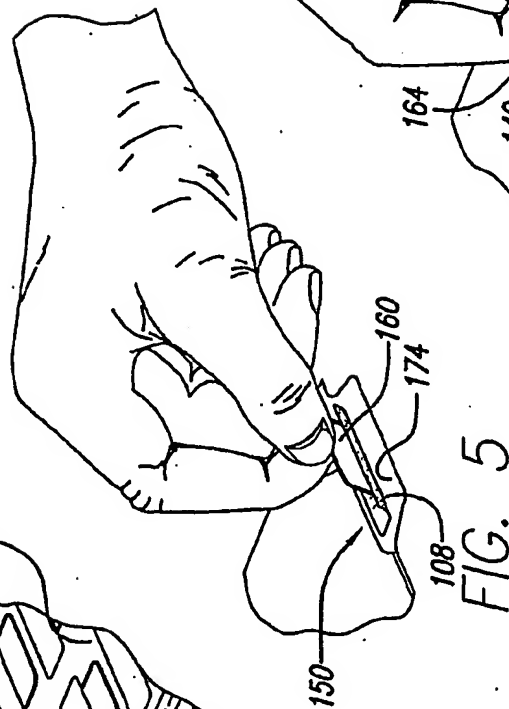


FIG. 5

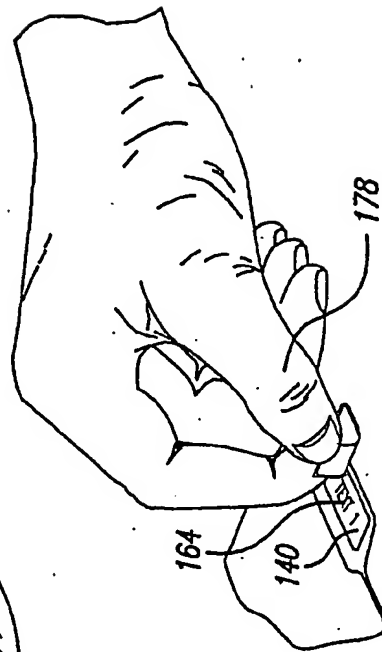
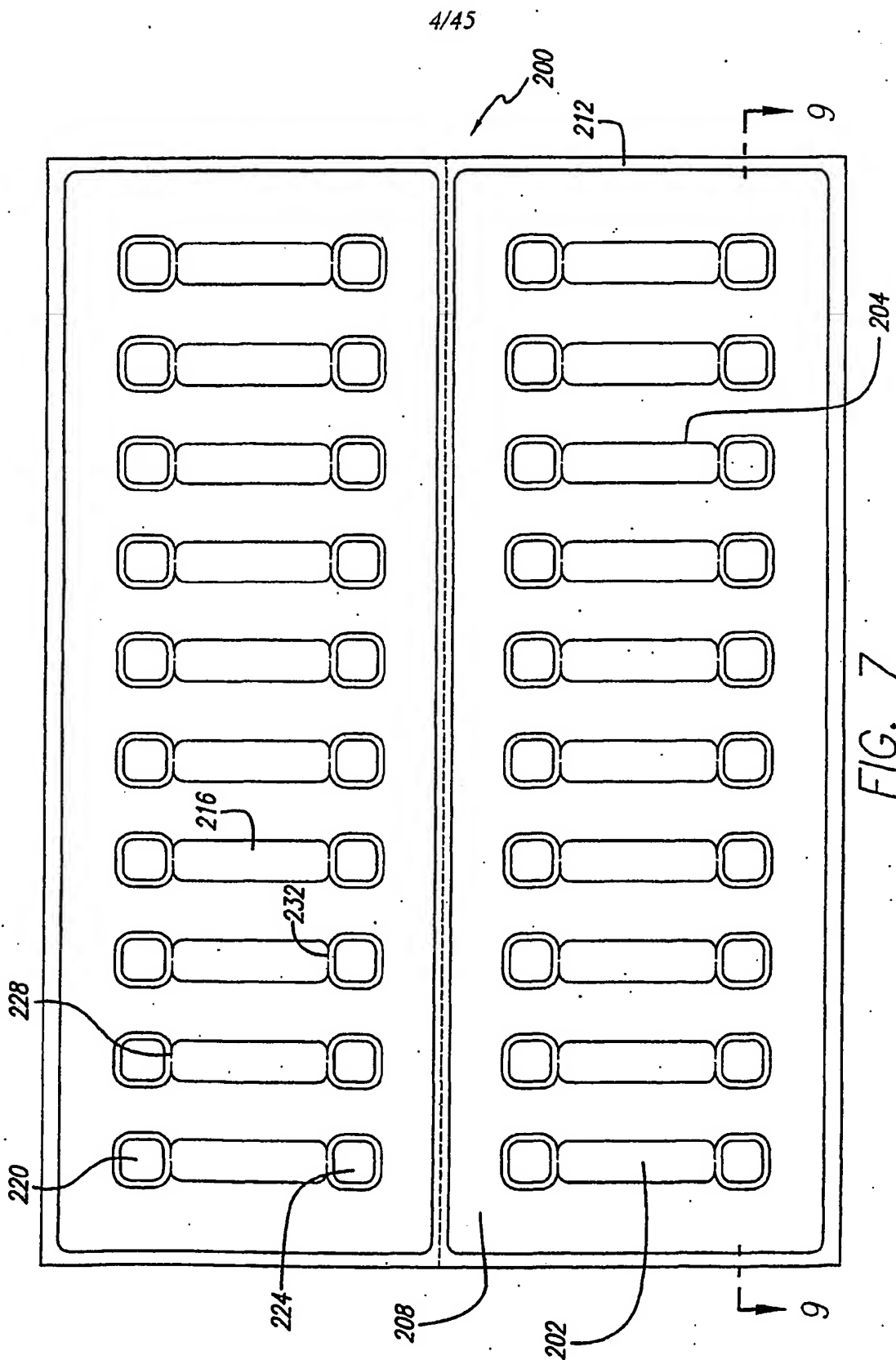


FIG. 6



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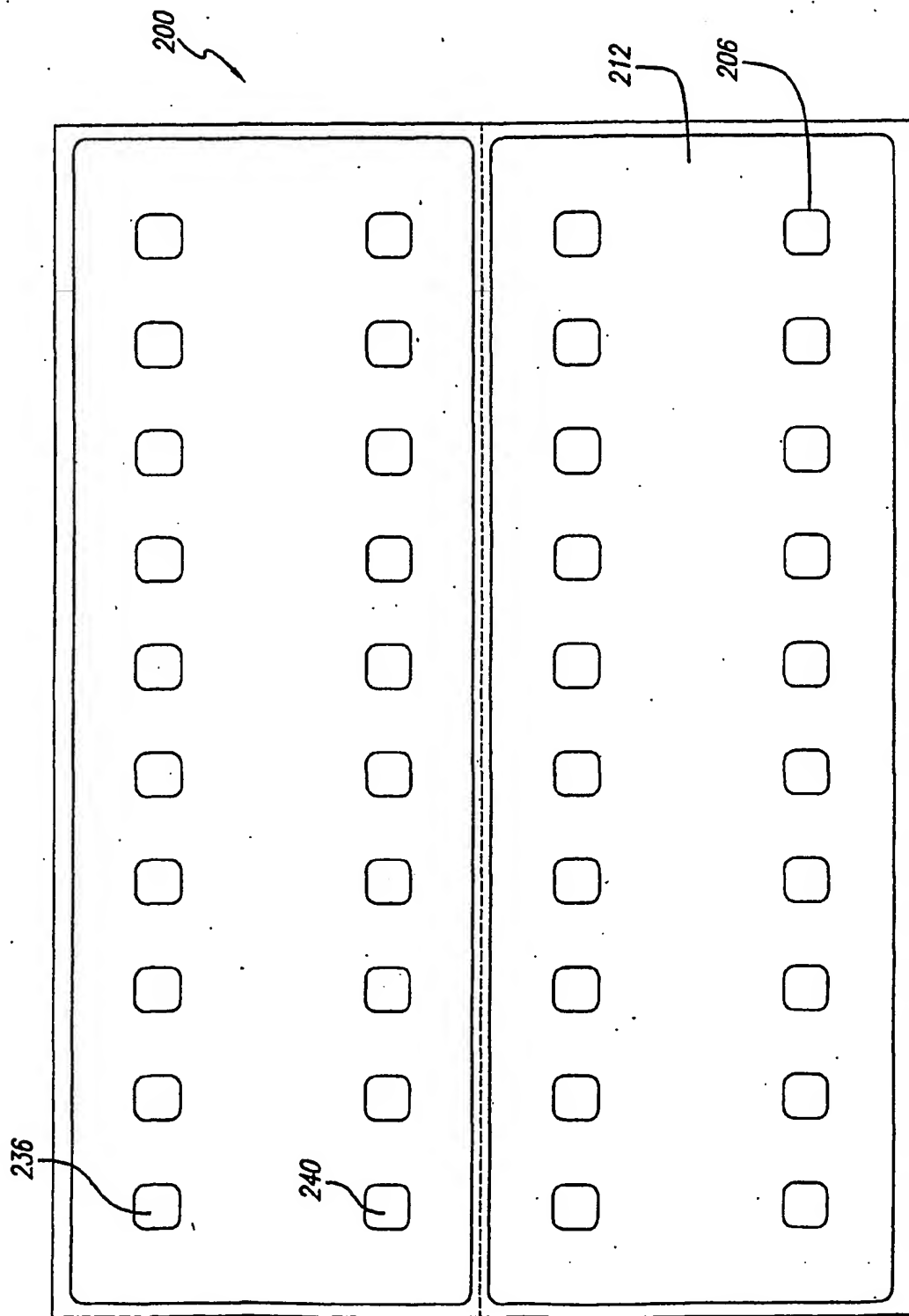


FIG. 8

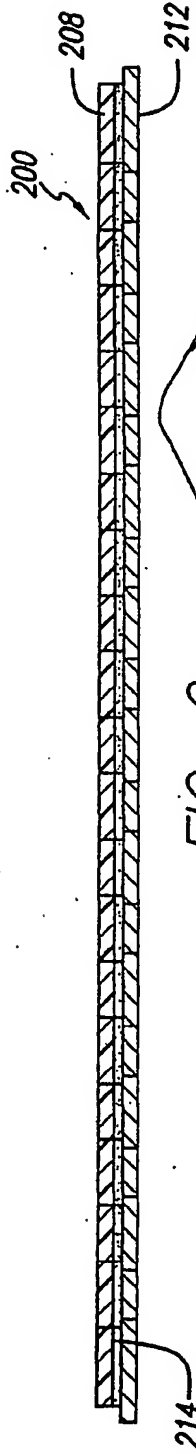


FIG. 9

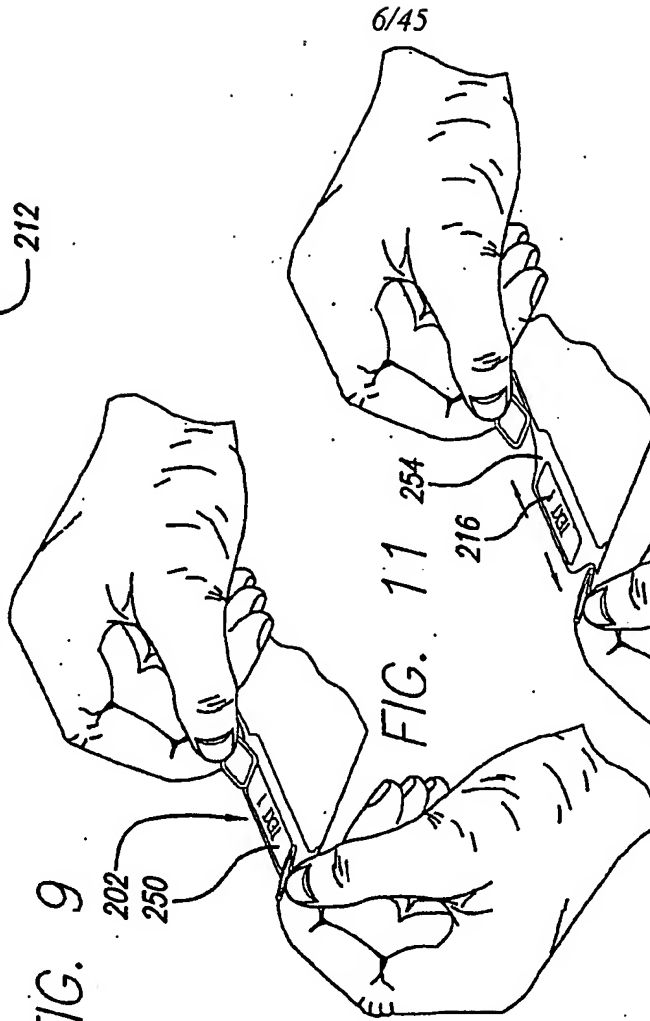


FIG. 11

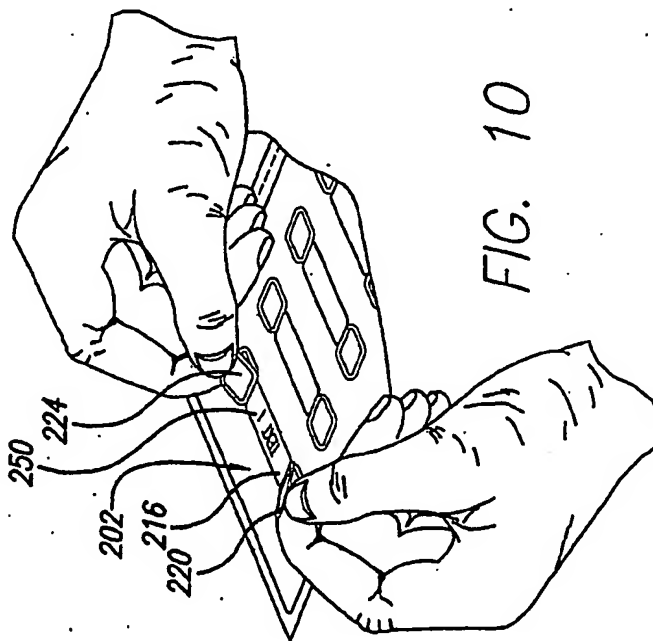


FIG. 10

FIG. 12

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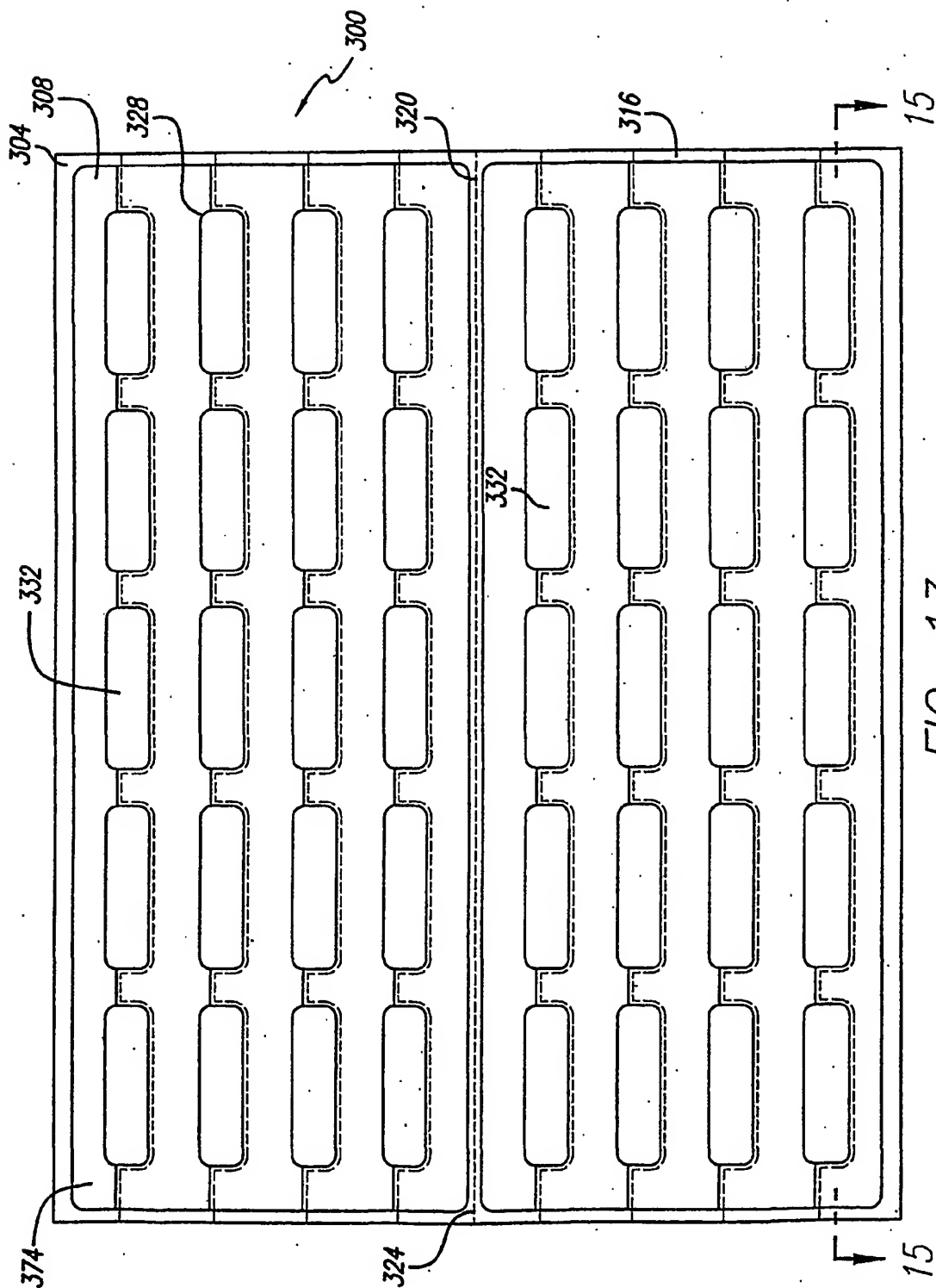


FIG. 13

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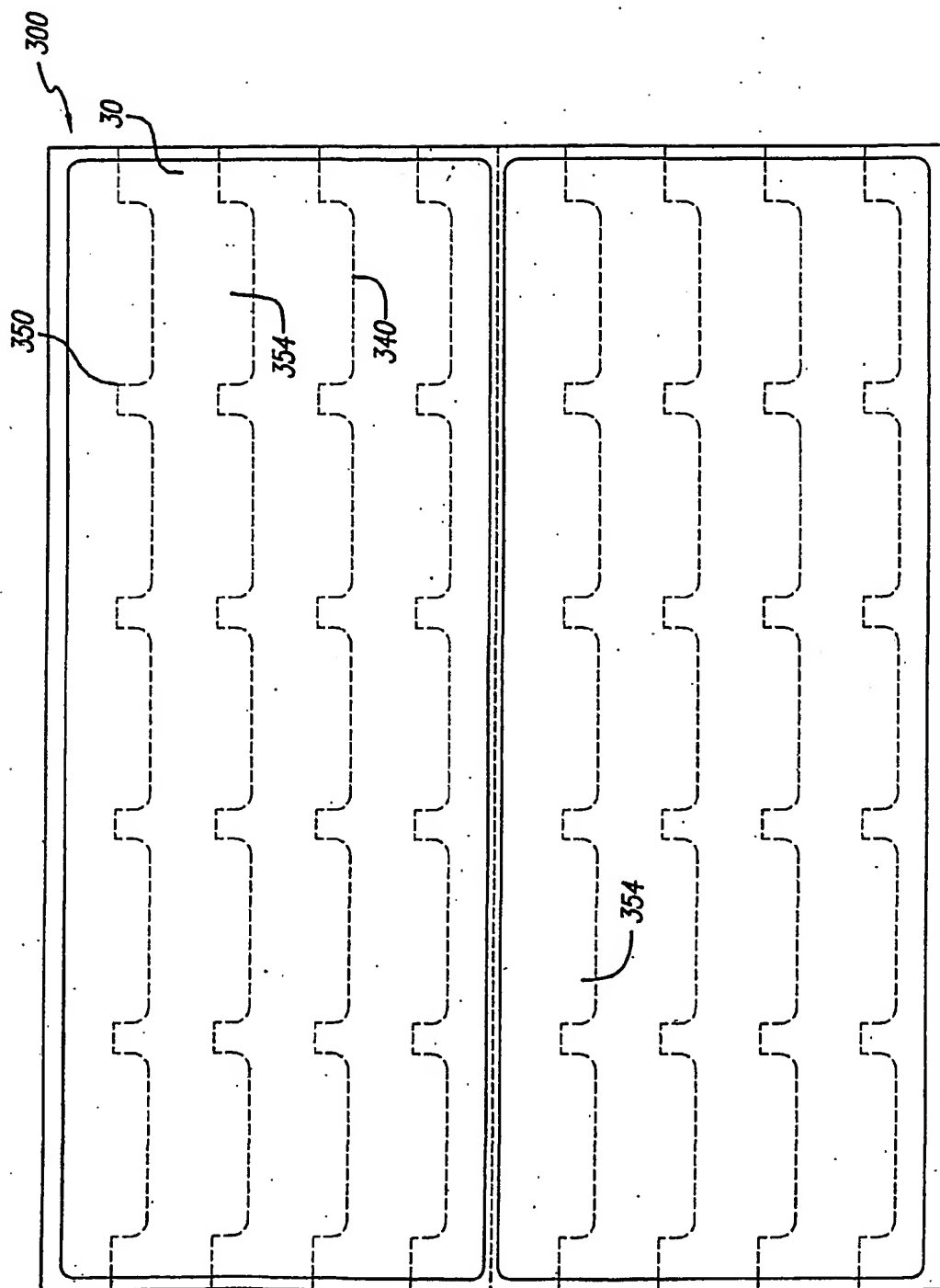


FIG. 14

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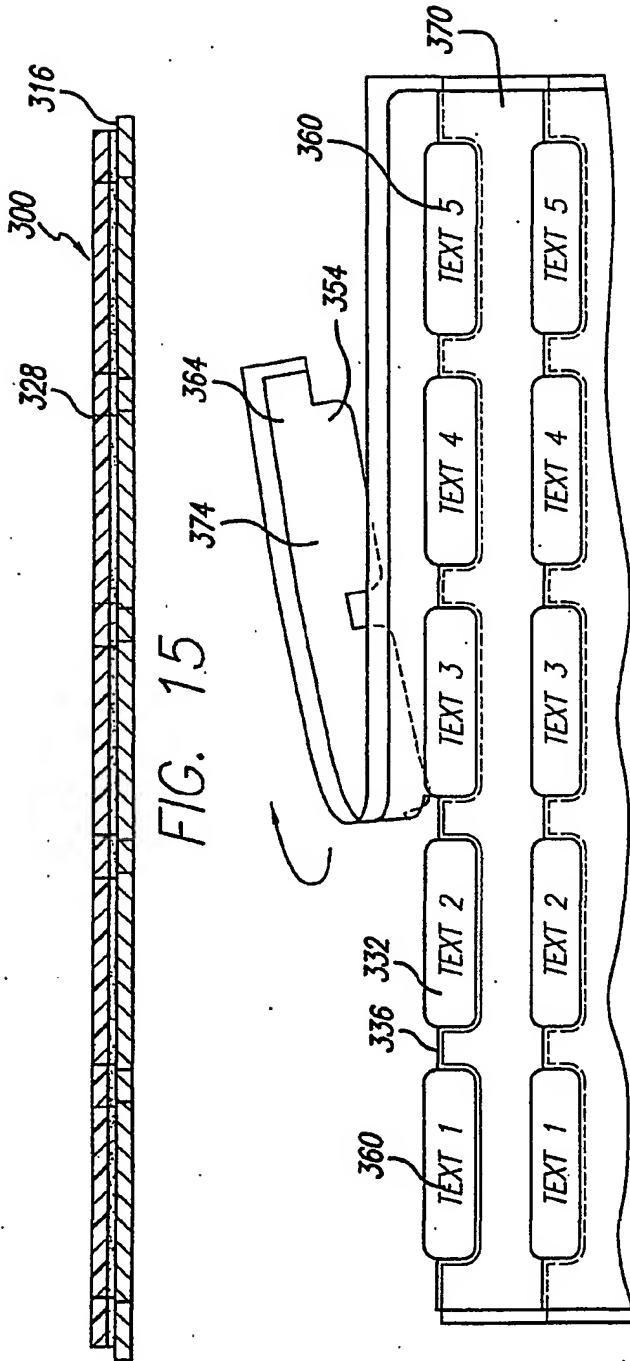


FIG. 15

FIG. 16

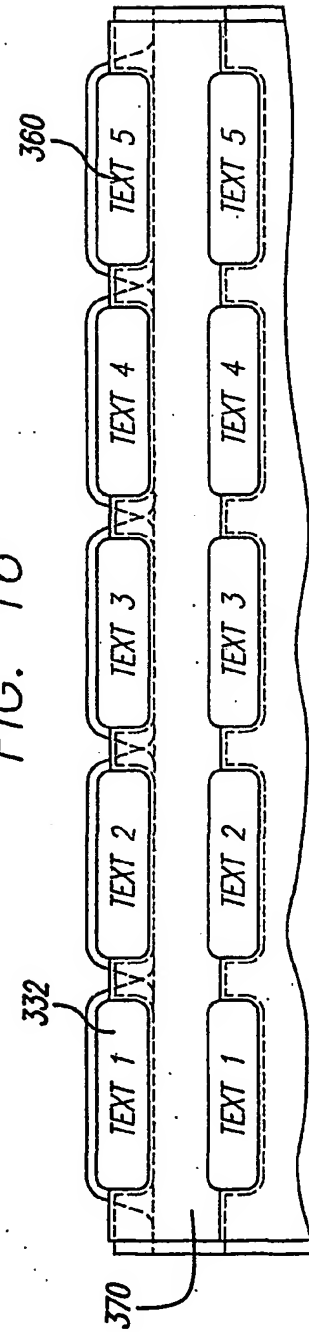


FIG. 17

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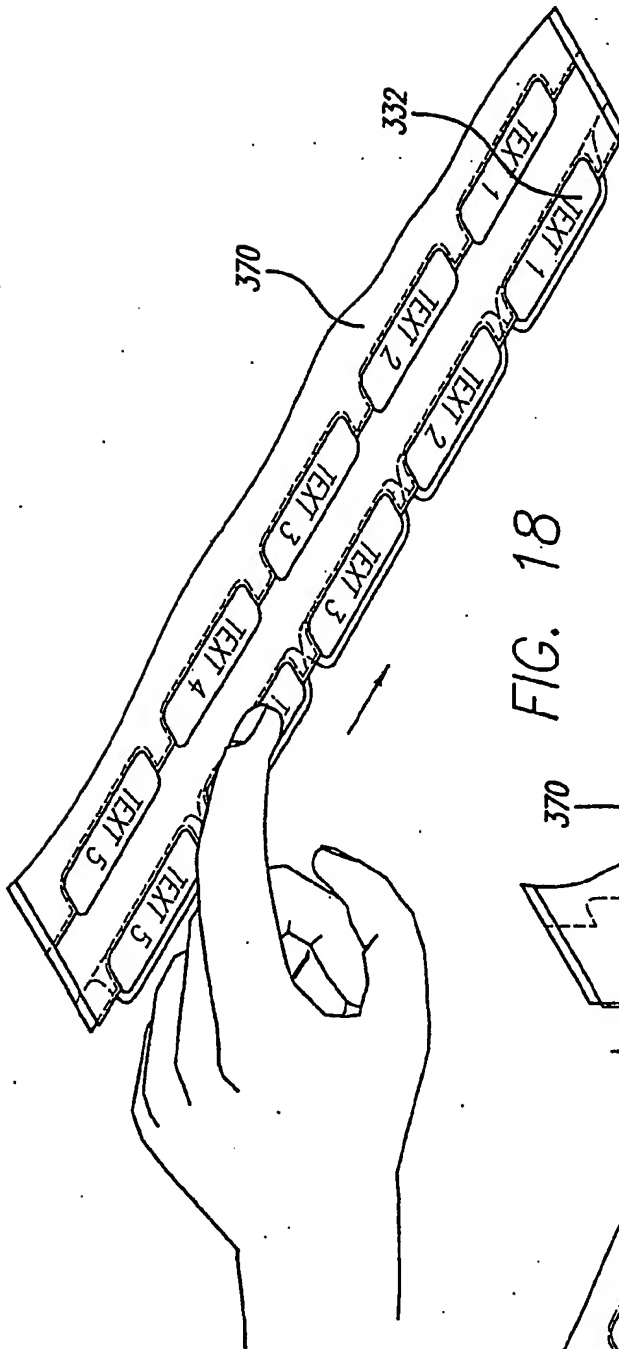


FIG. 18

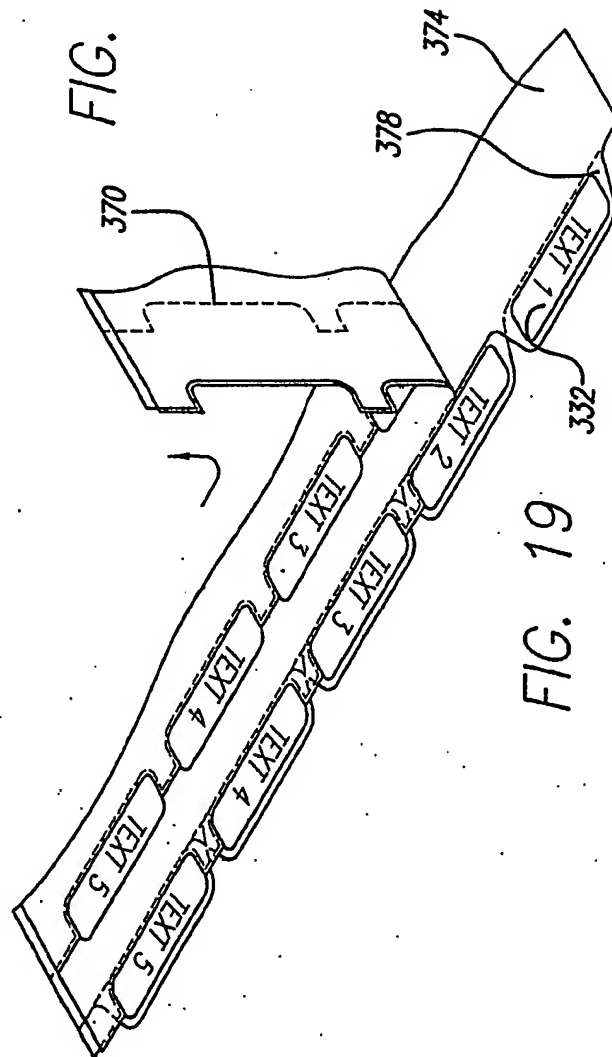


FIG. 19

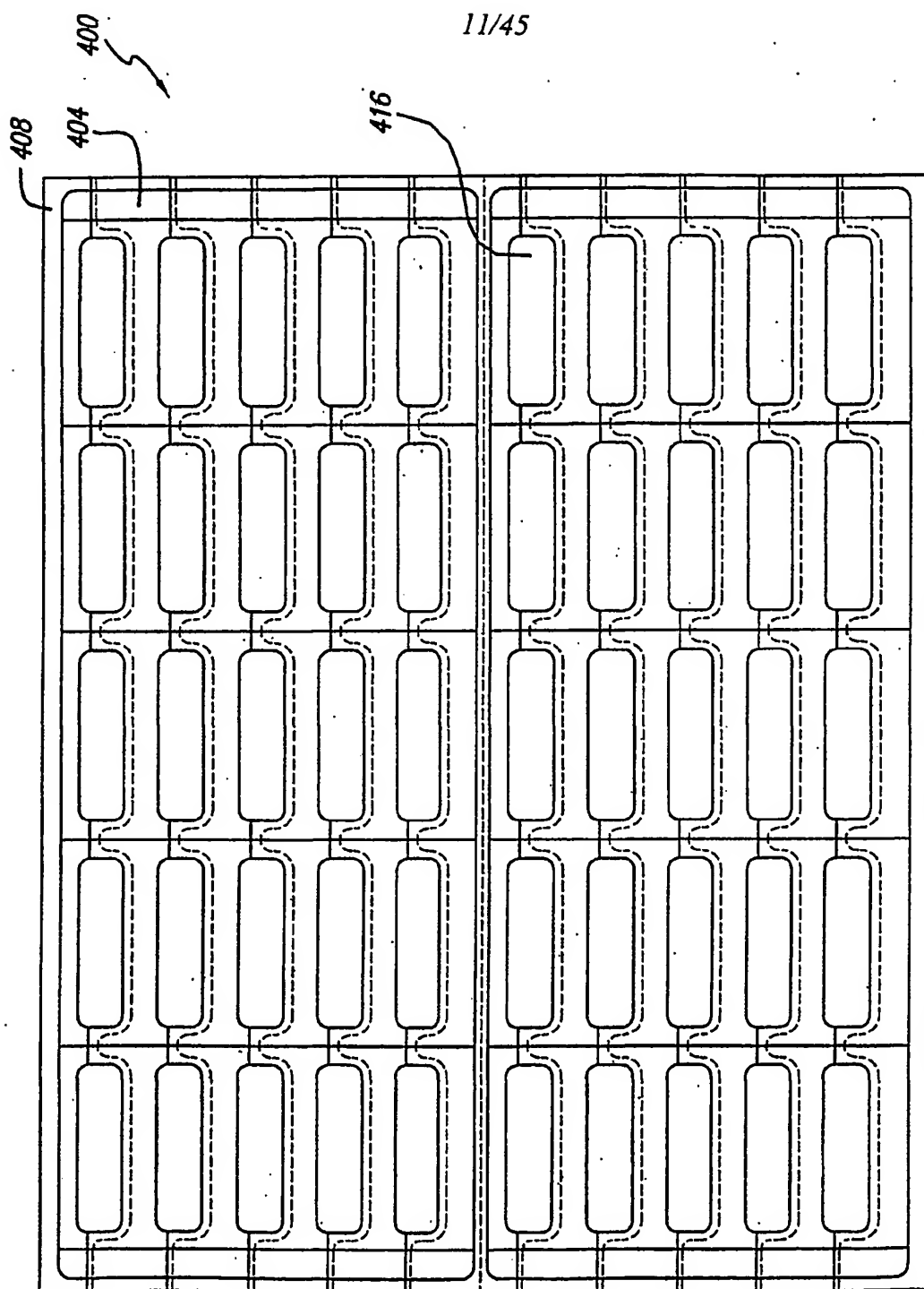
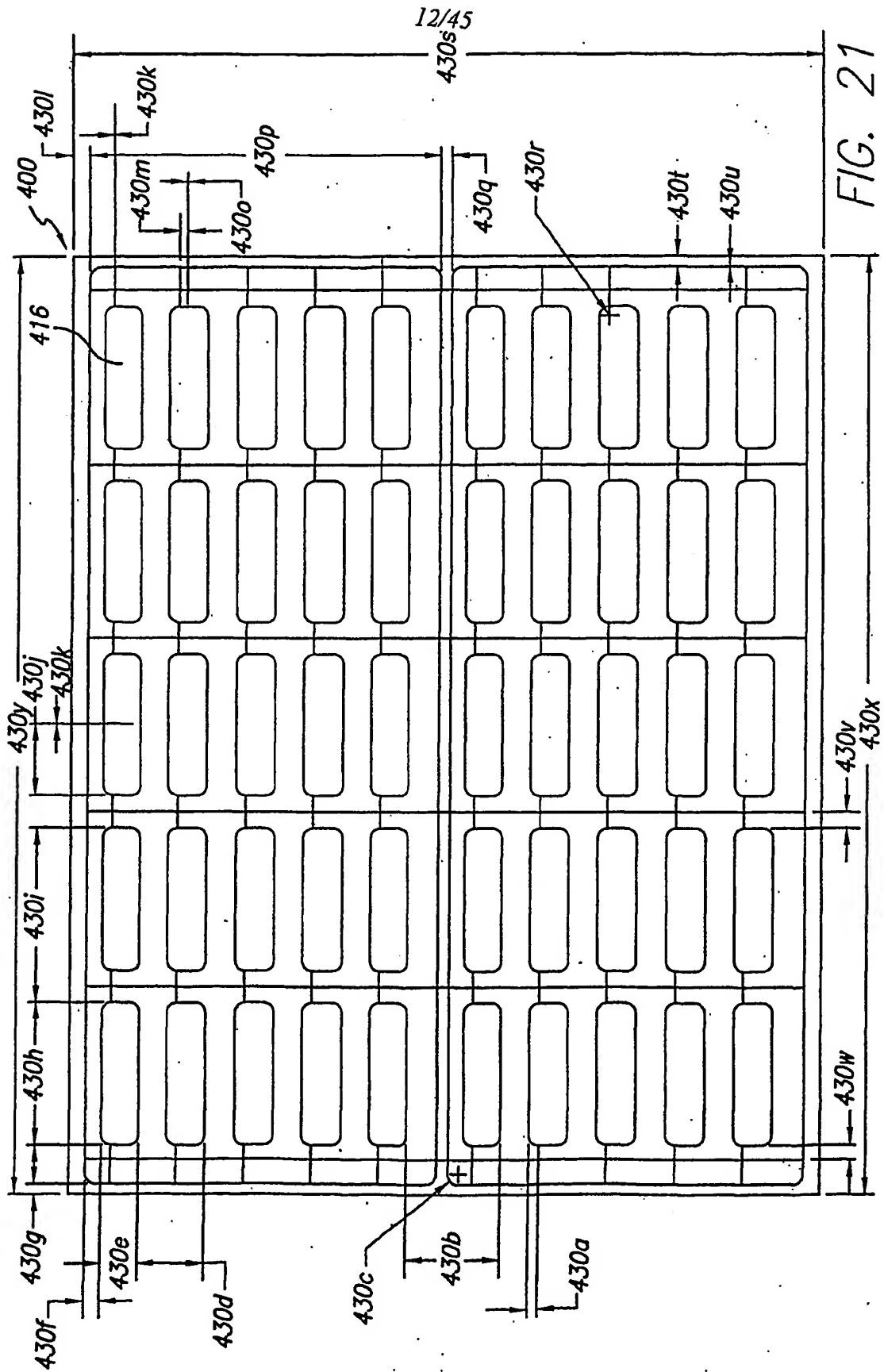


FIG. 20





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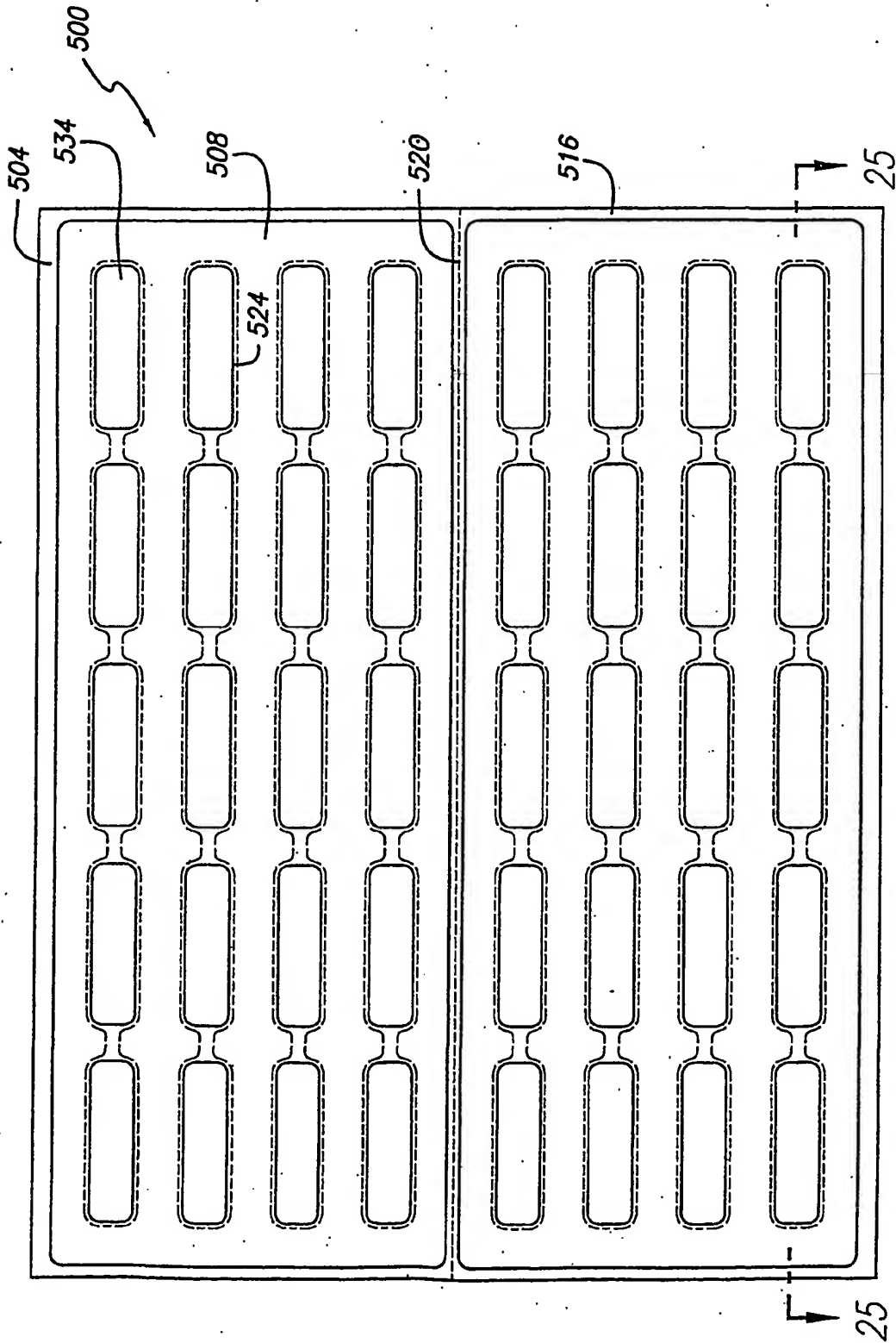


FIG. 23

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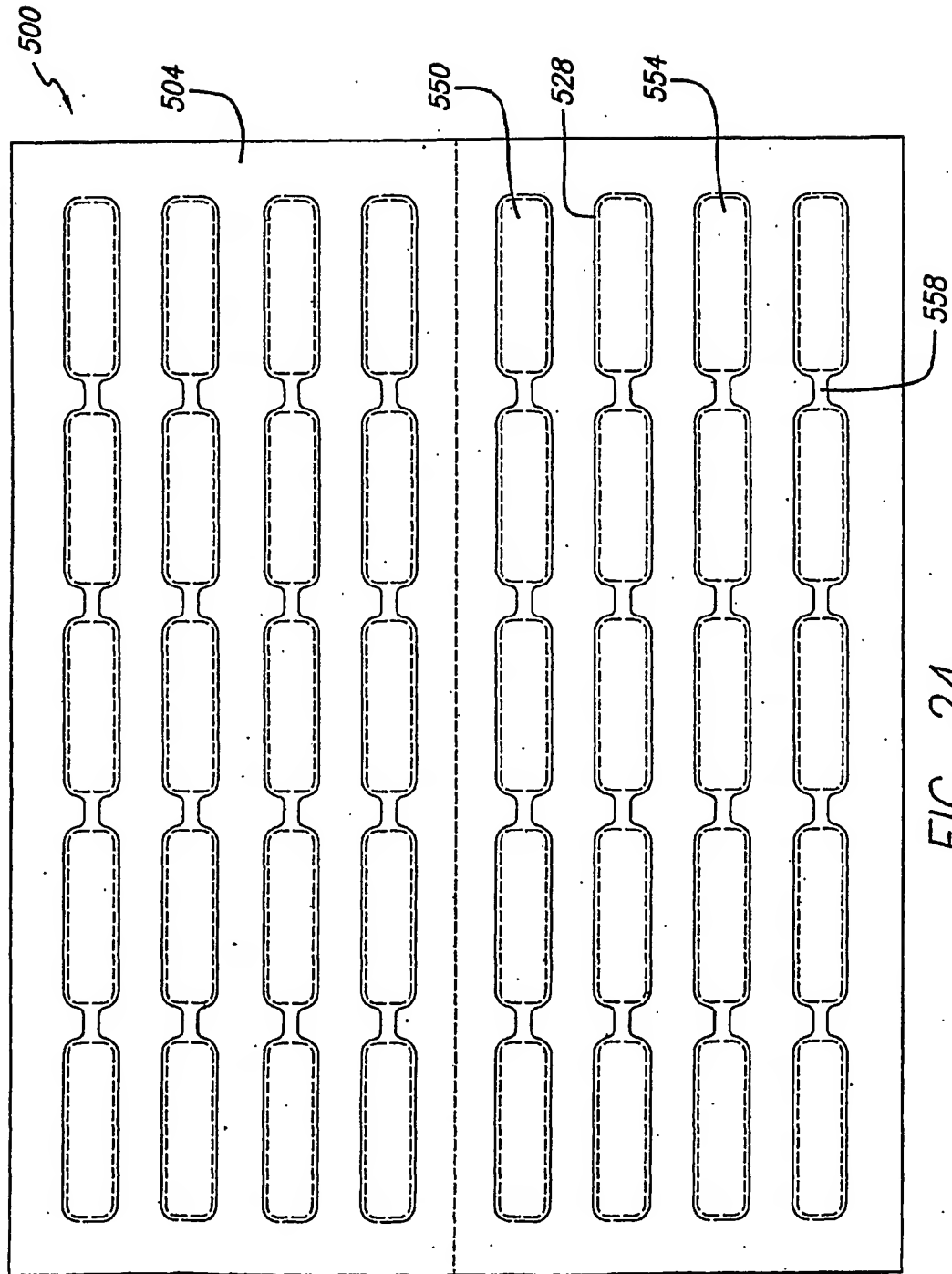


FIG. 24

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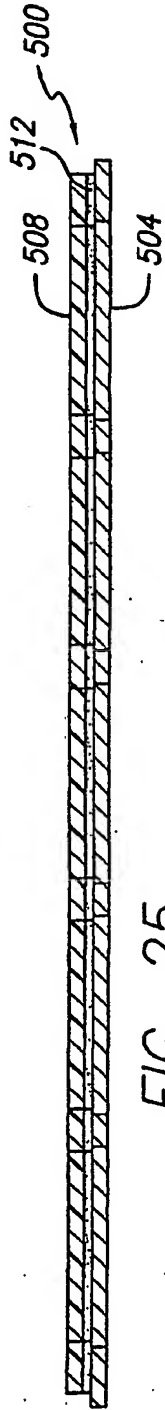


FIG. 25

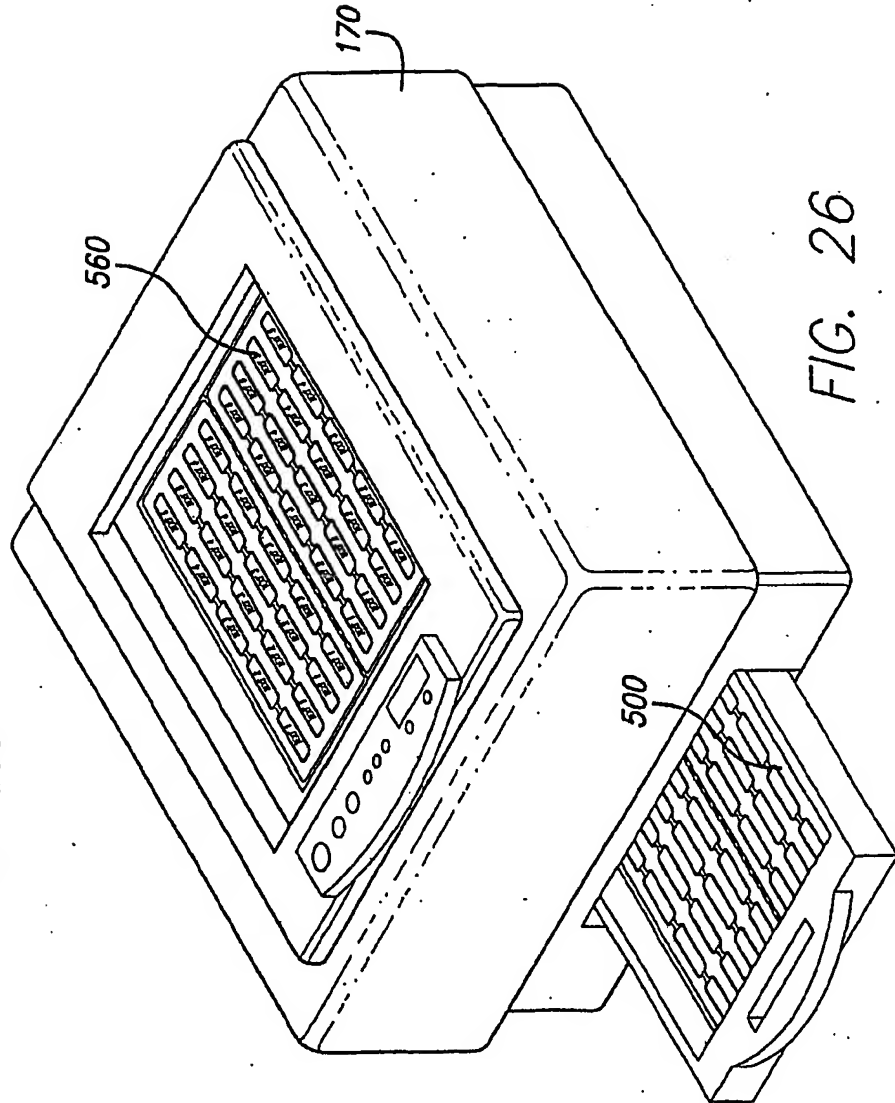


FIG. 26

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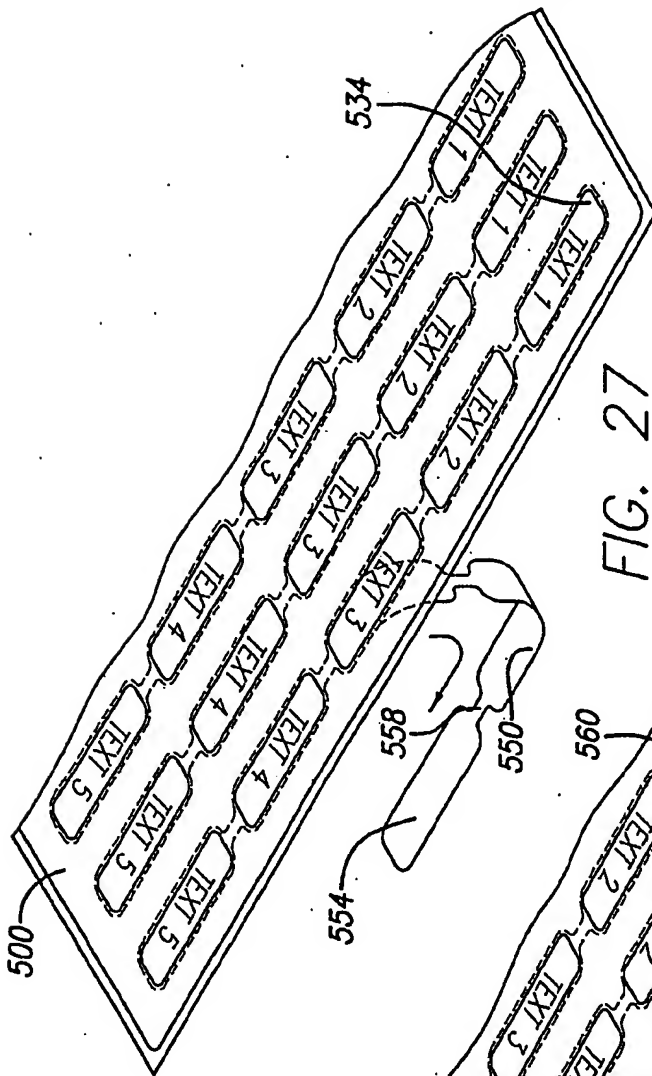


FIG. 27

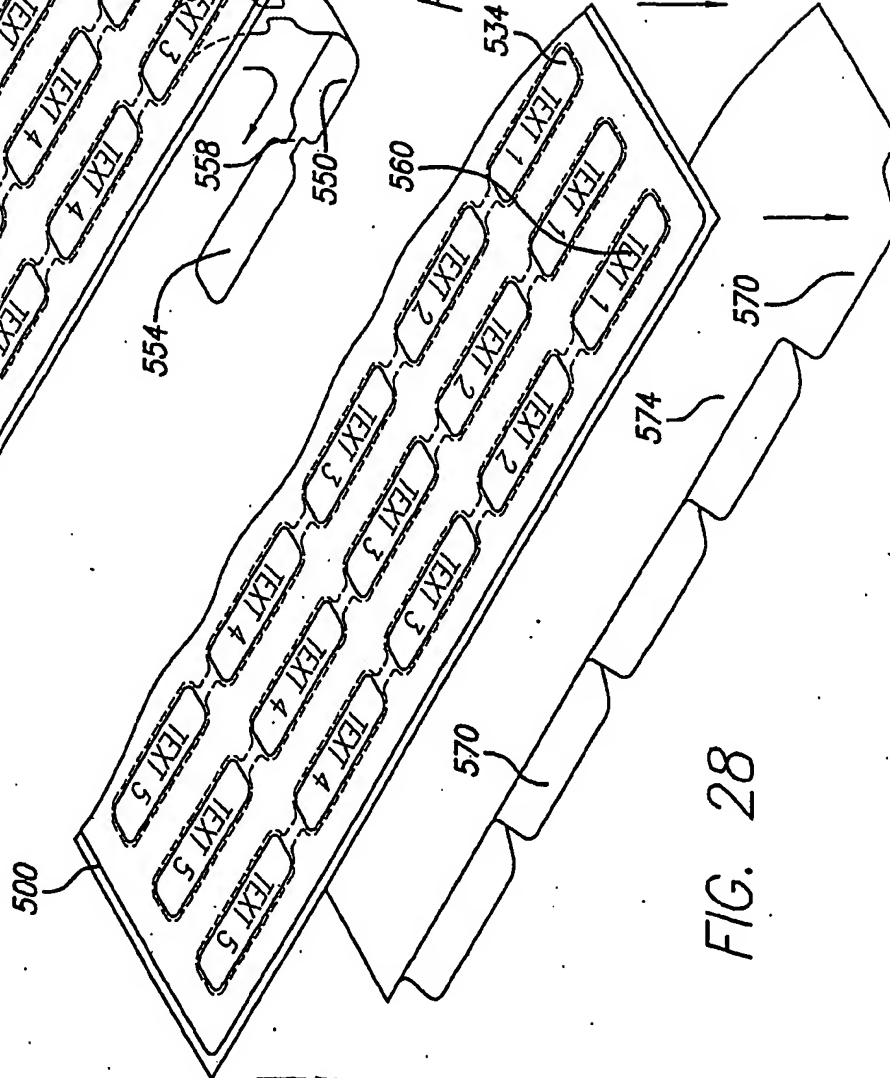


FIG. 28

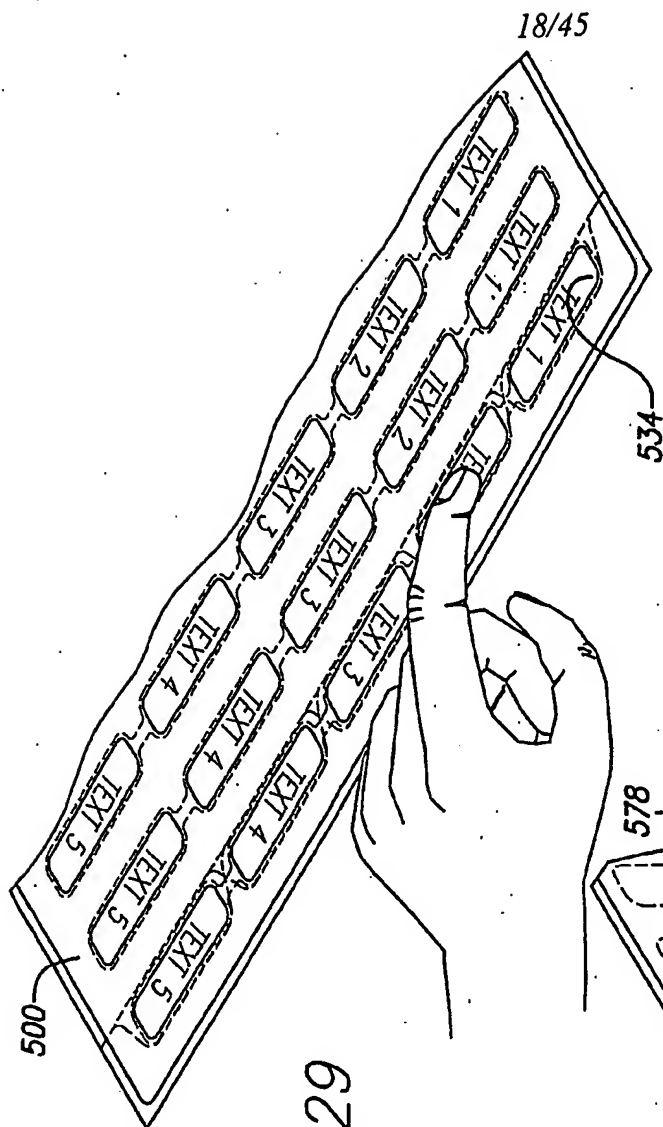


FIG. 29

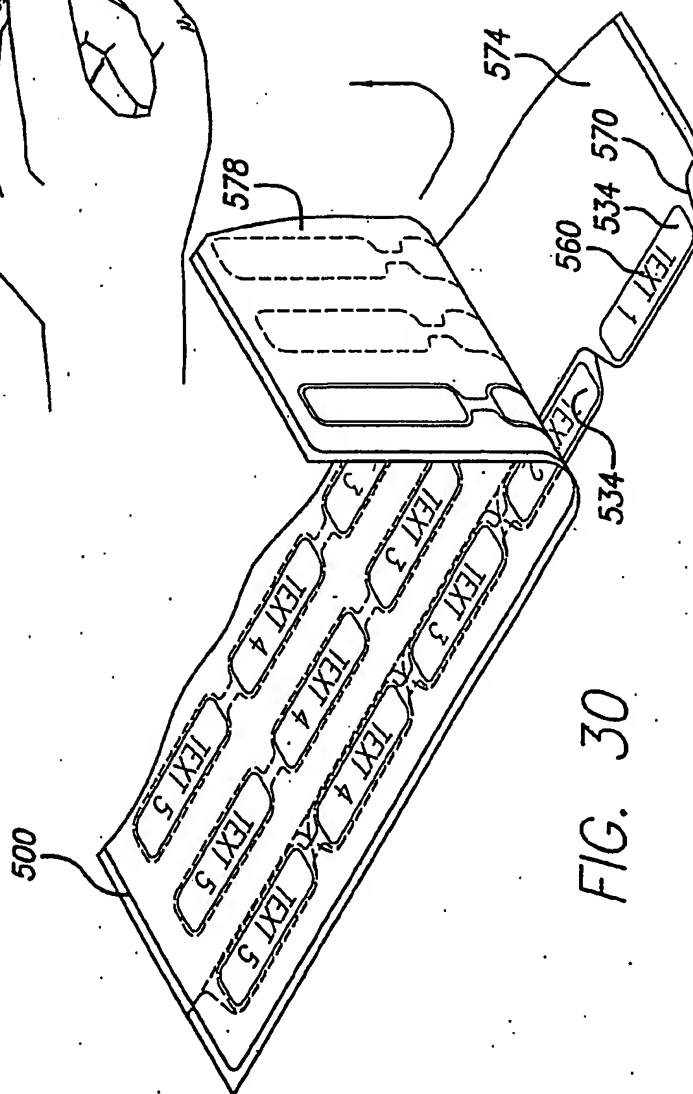


FIG. 30

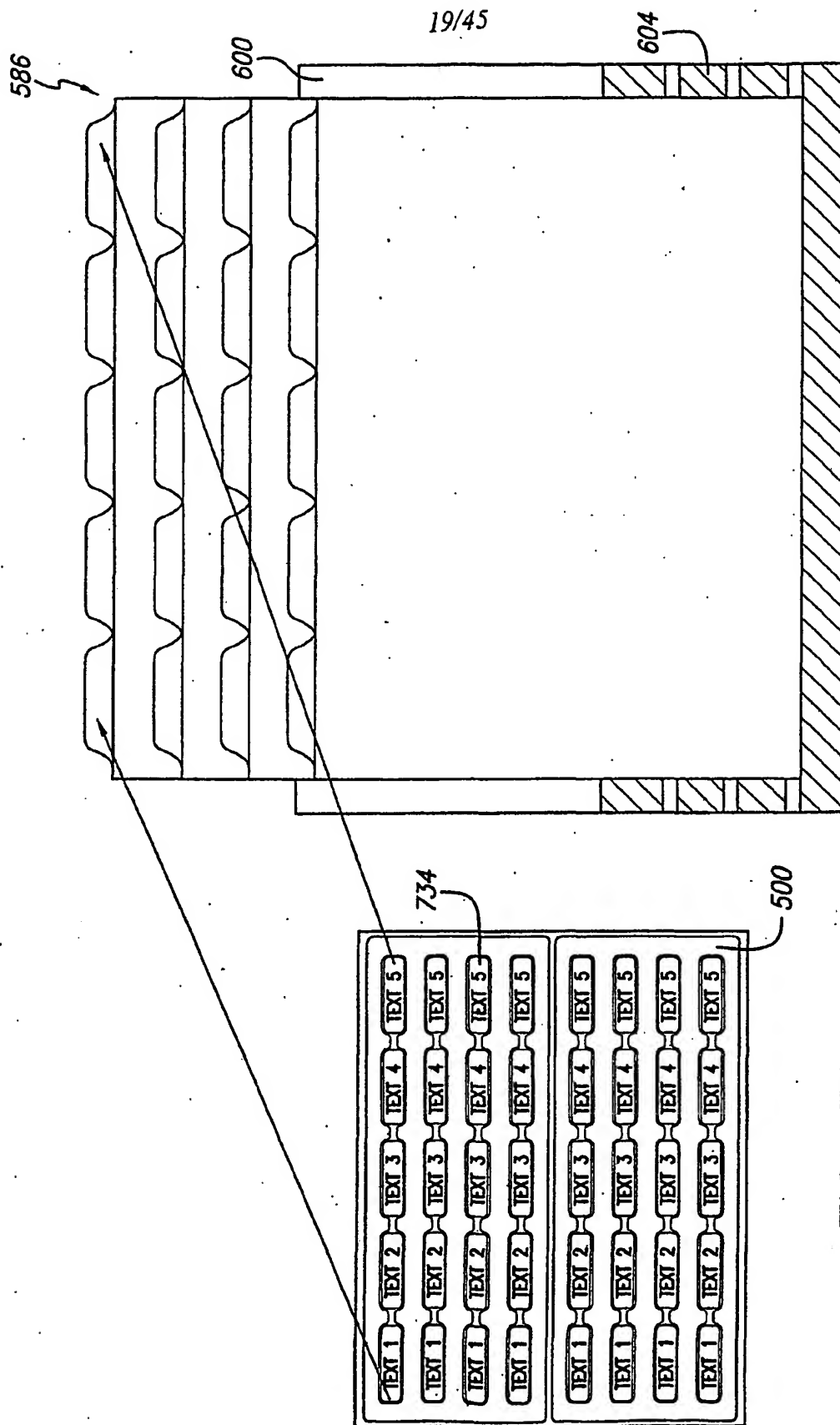


FIG. 31

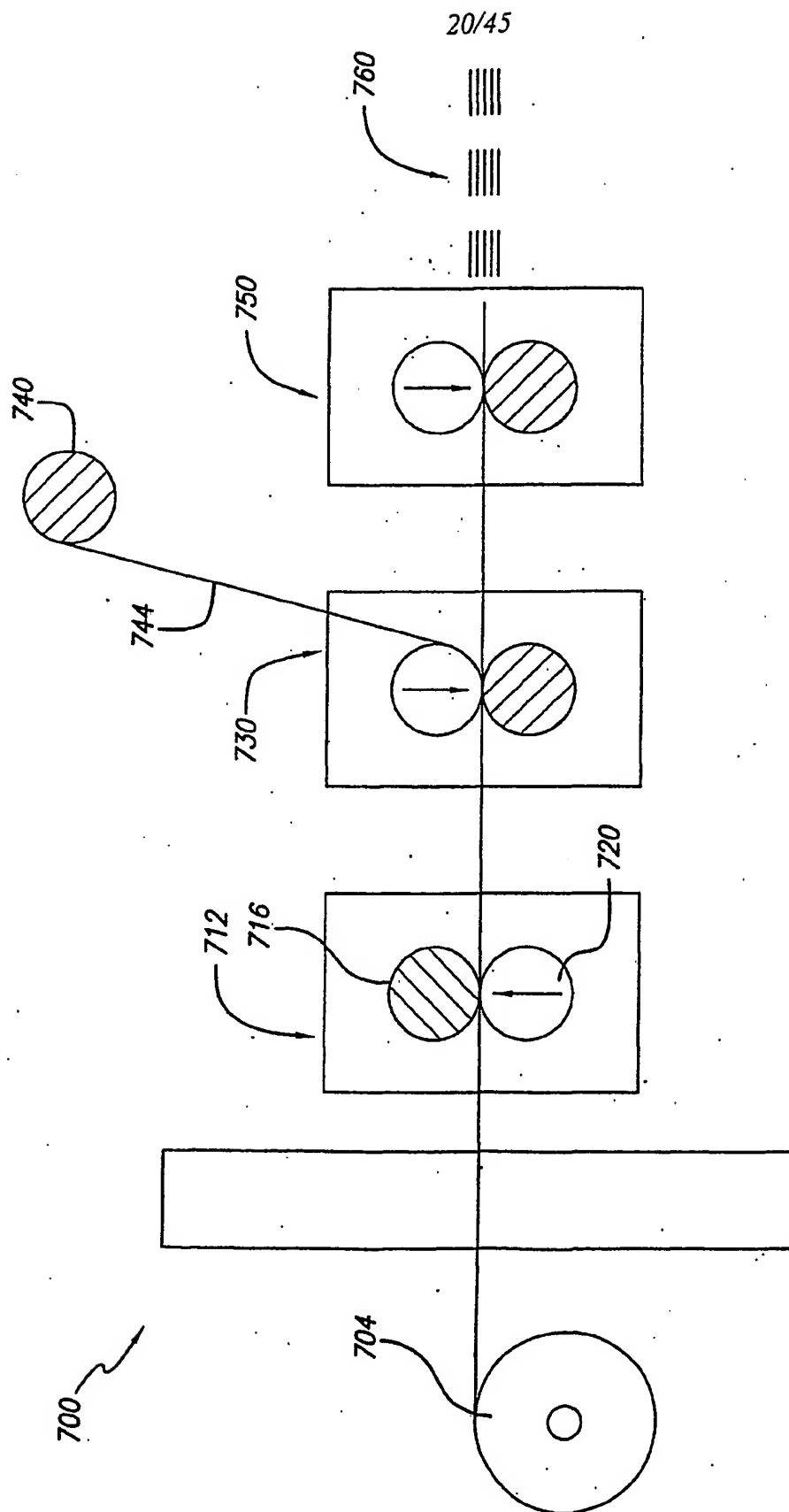
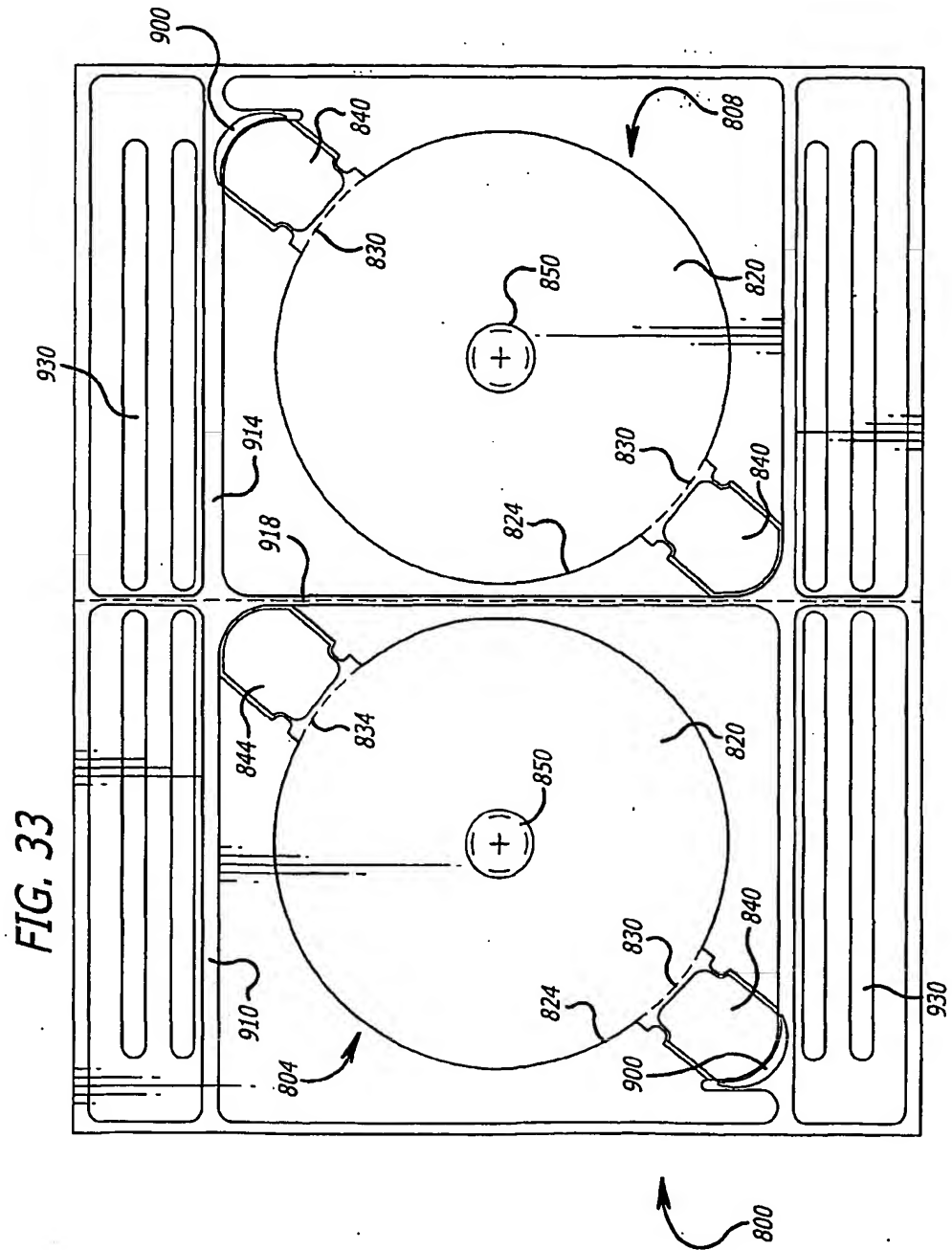
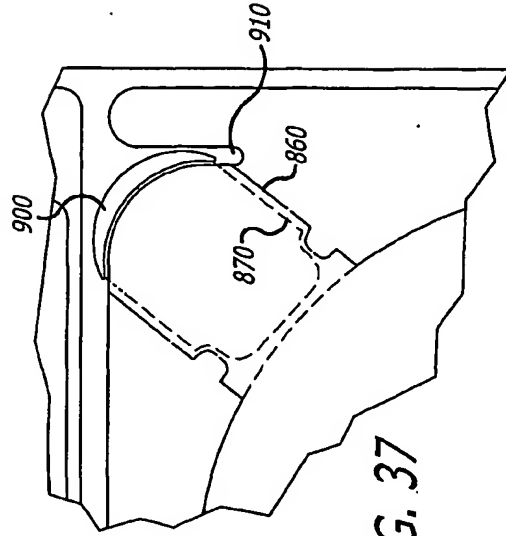
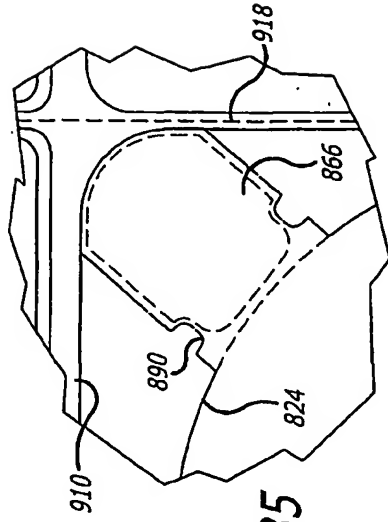
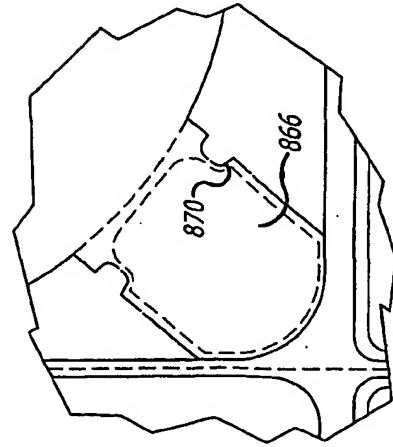
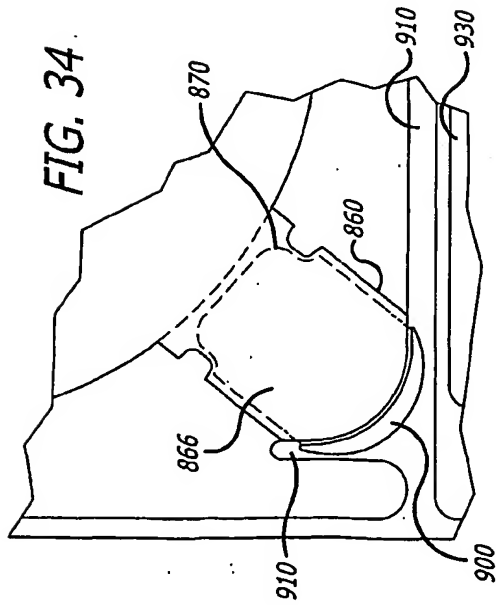


FIG. 32

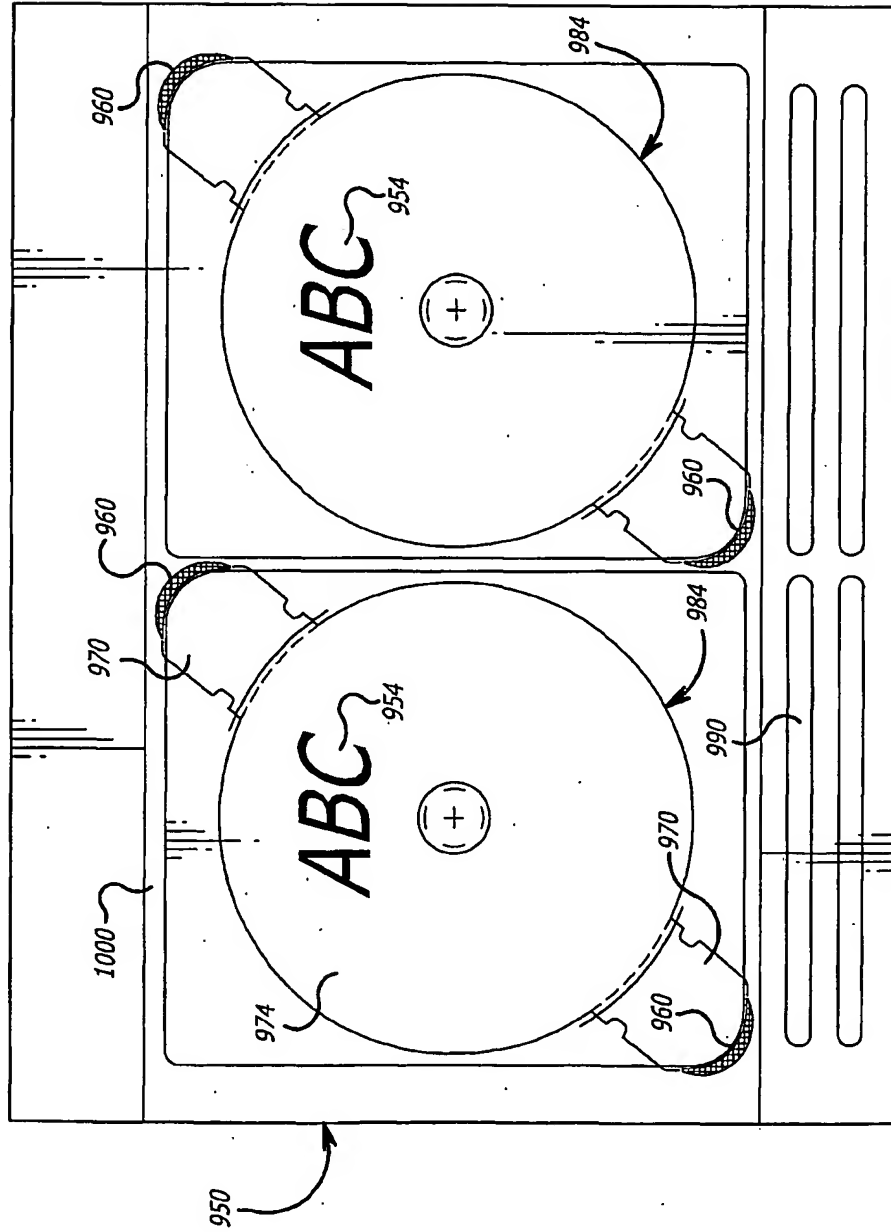
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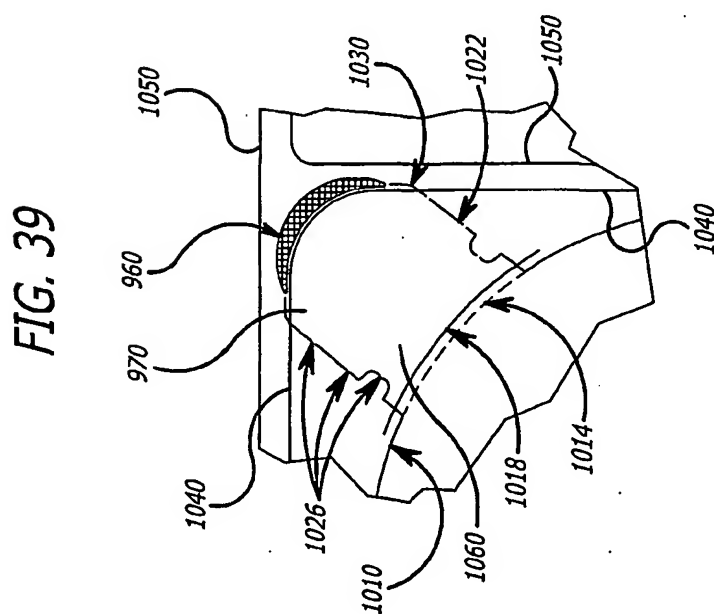
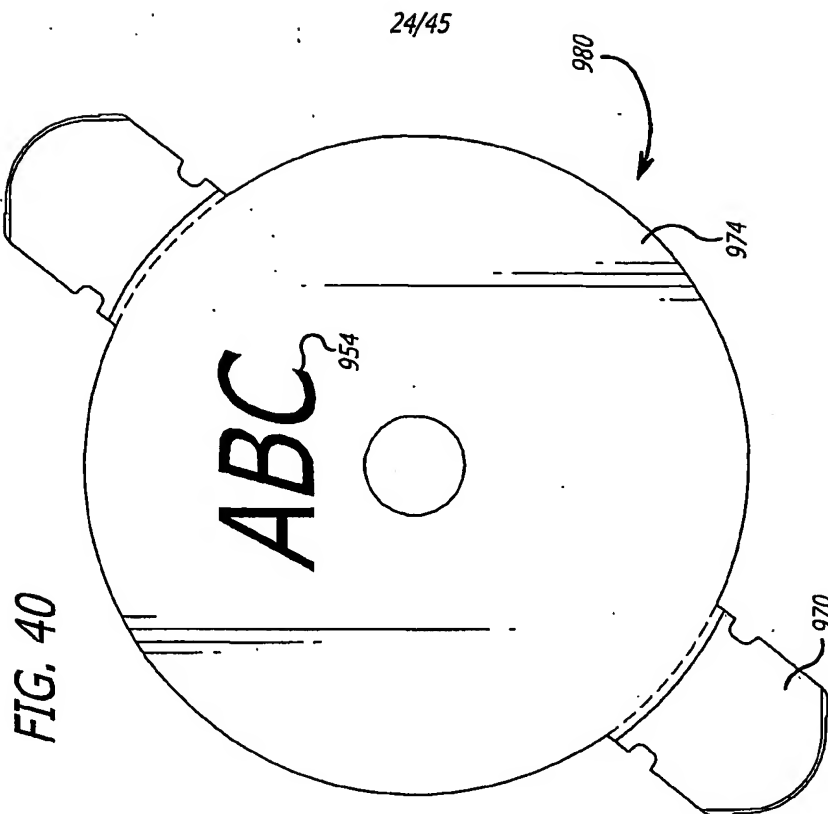




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FIG. 38





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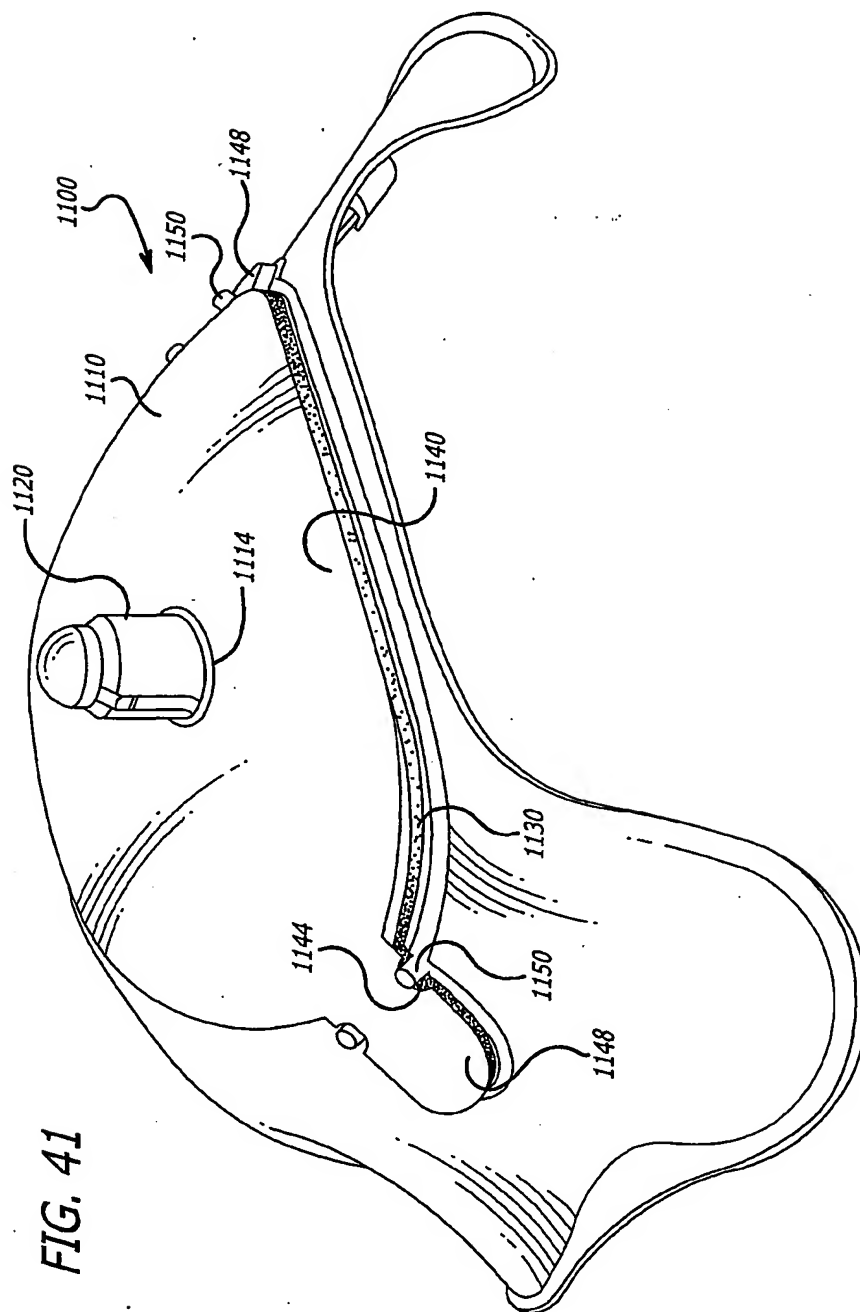
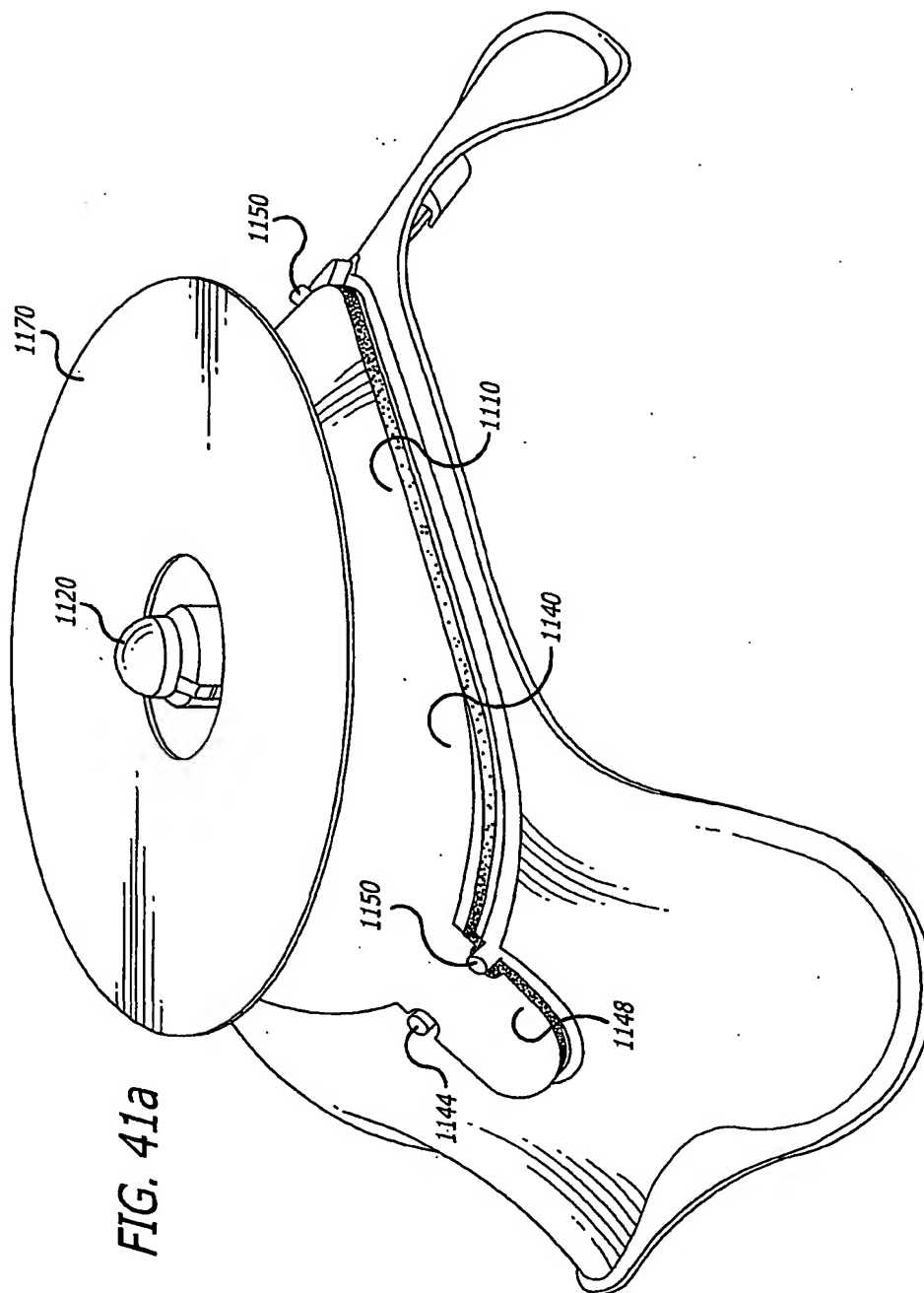
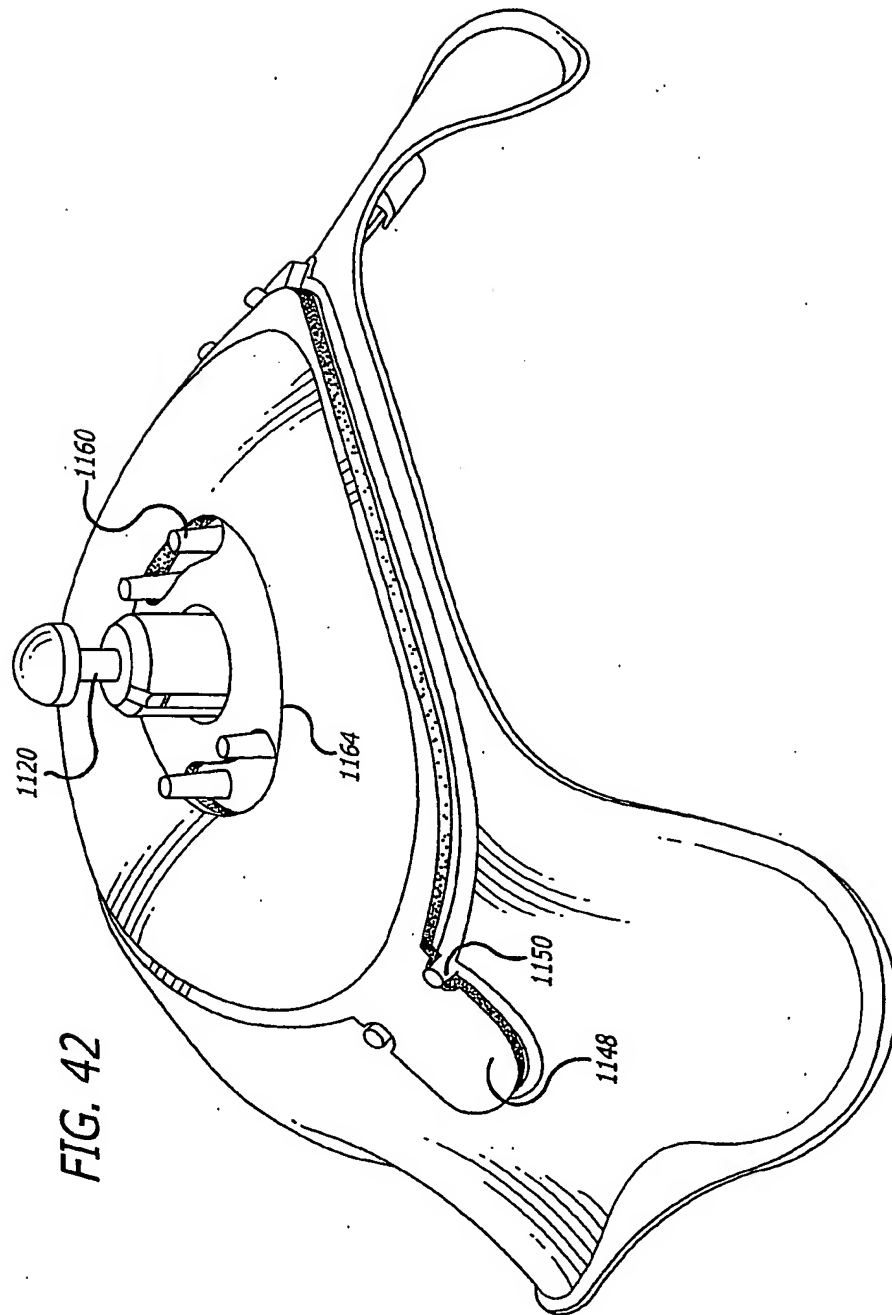


FIG. 41

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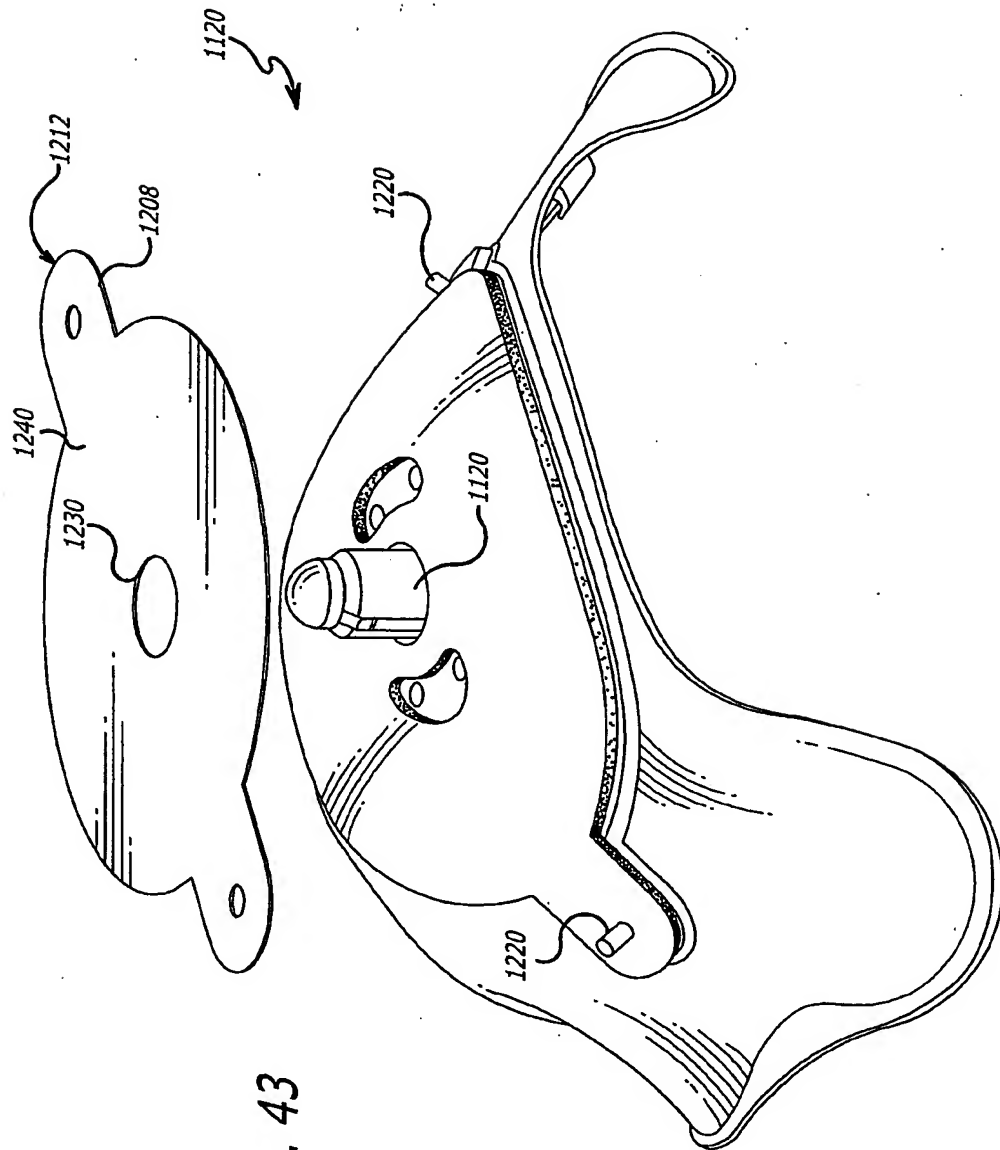


FIG. 43

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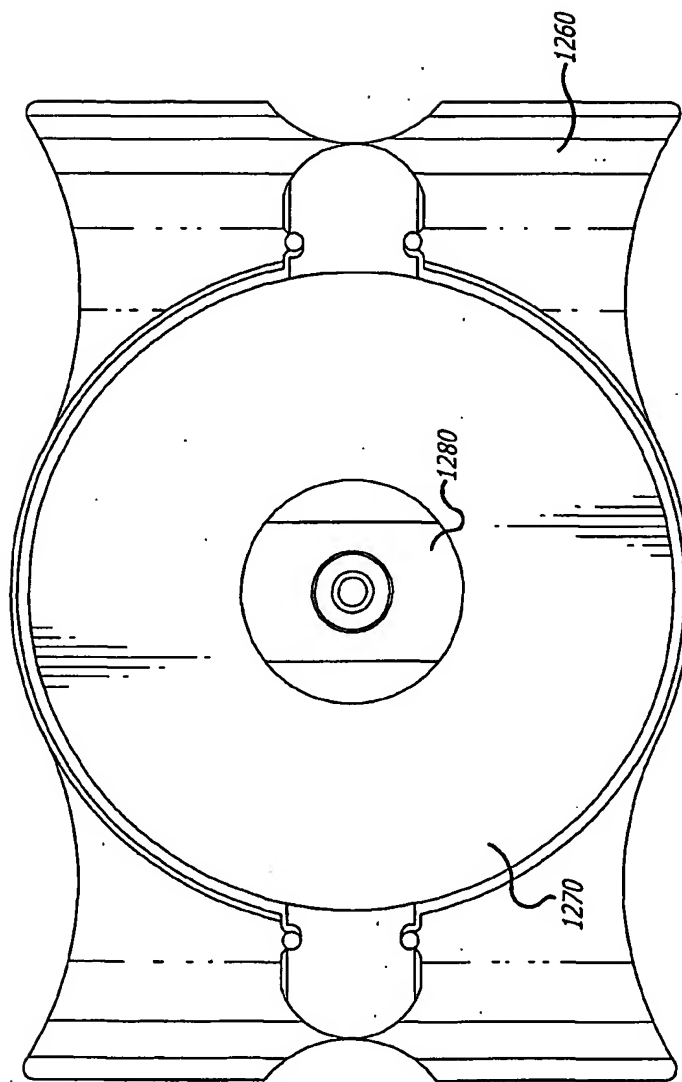


FIG. 44

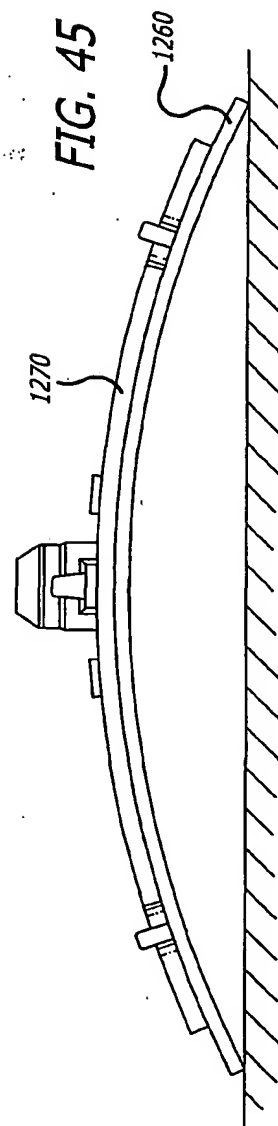


FIG. 45

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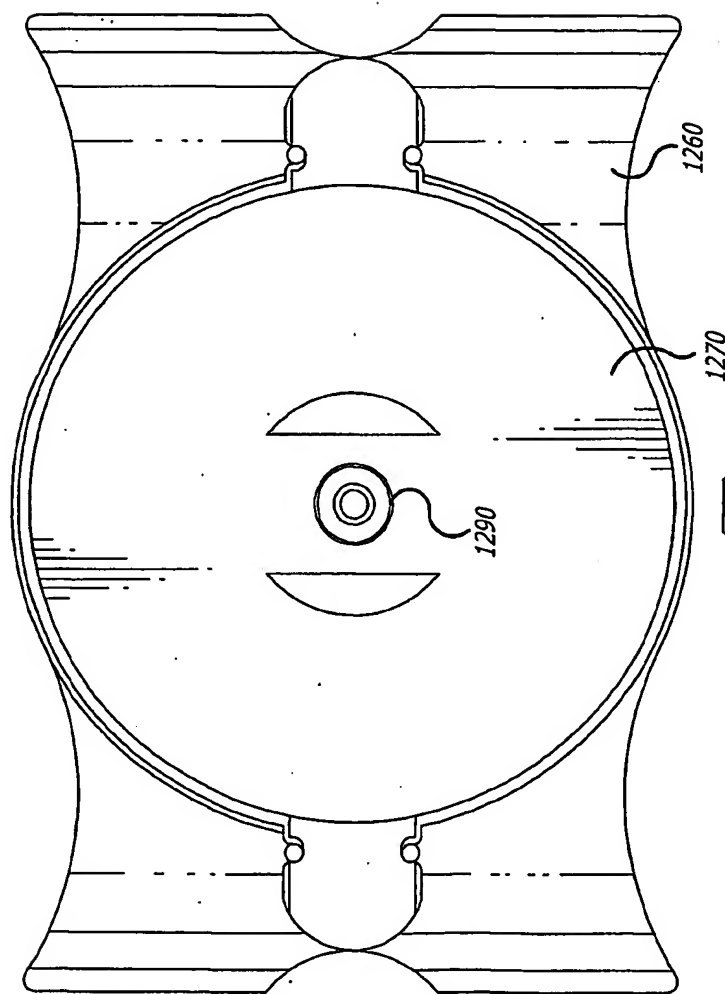


FIG. 46

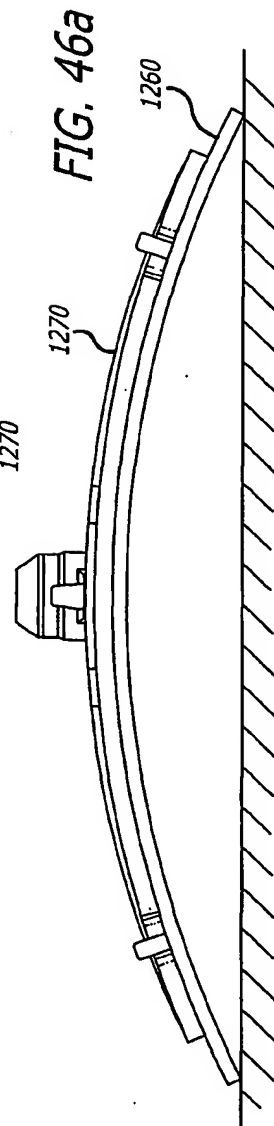
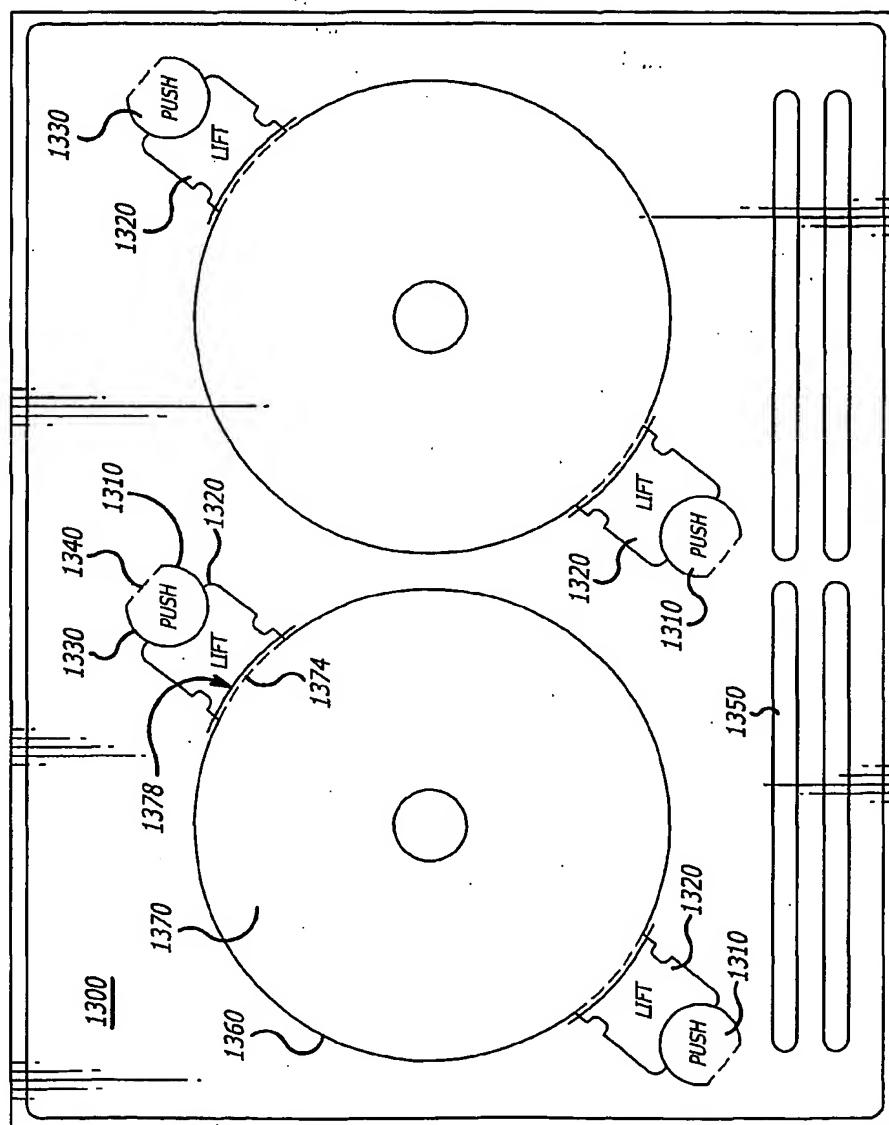


FIG. 46a

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FIG. 47



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FIG. 48

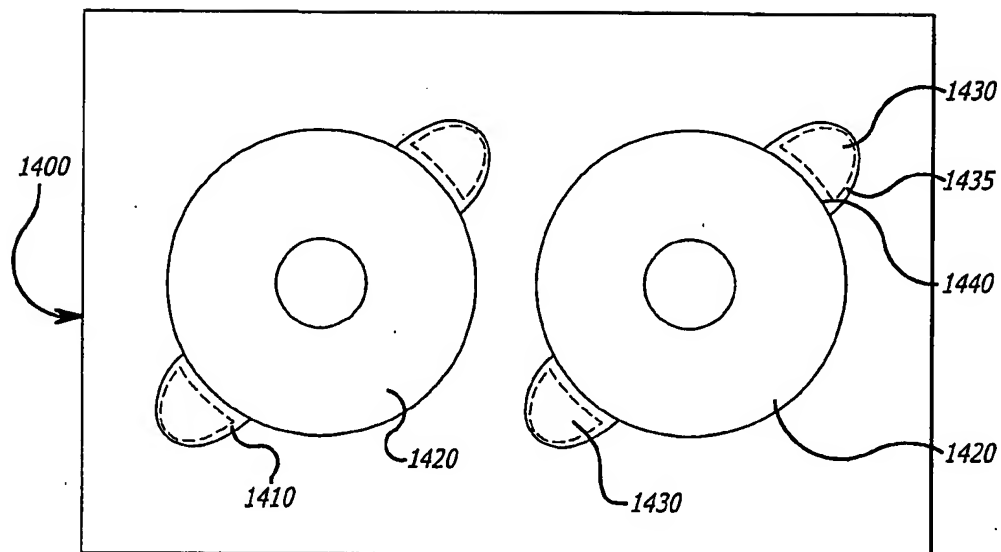
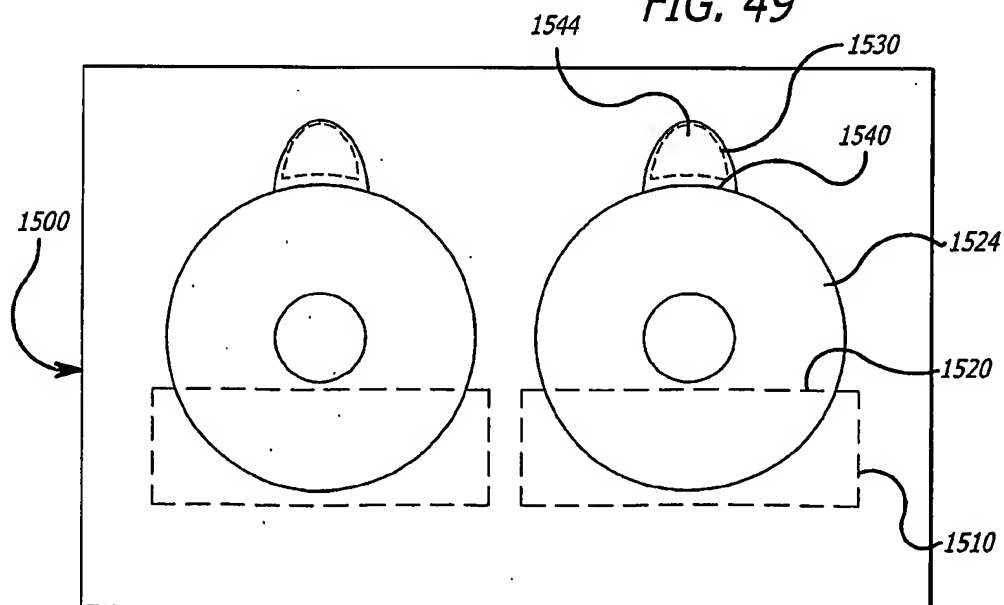


FIG. 49



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FIG. 50

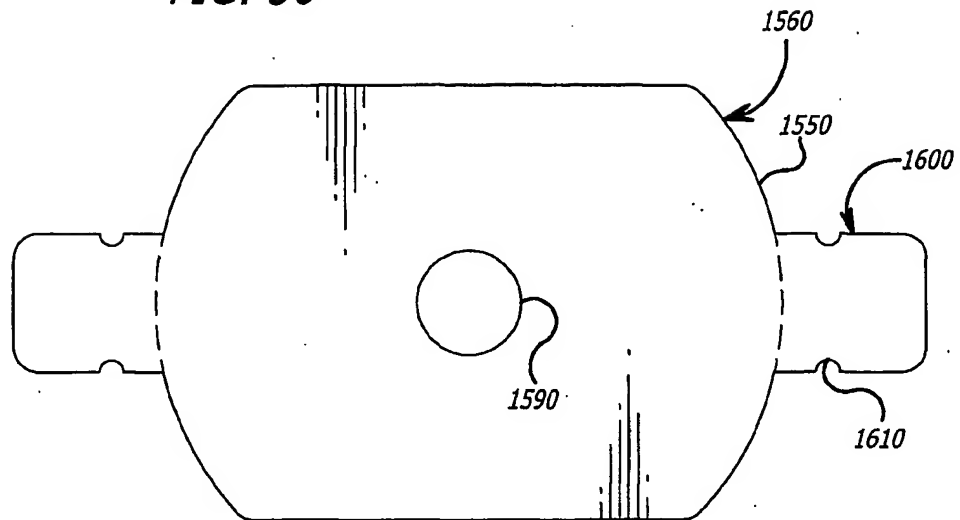
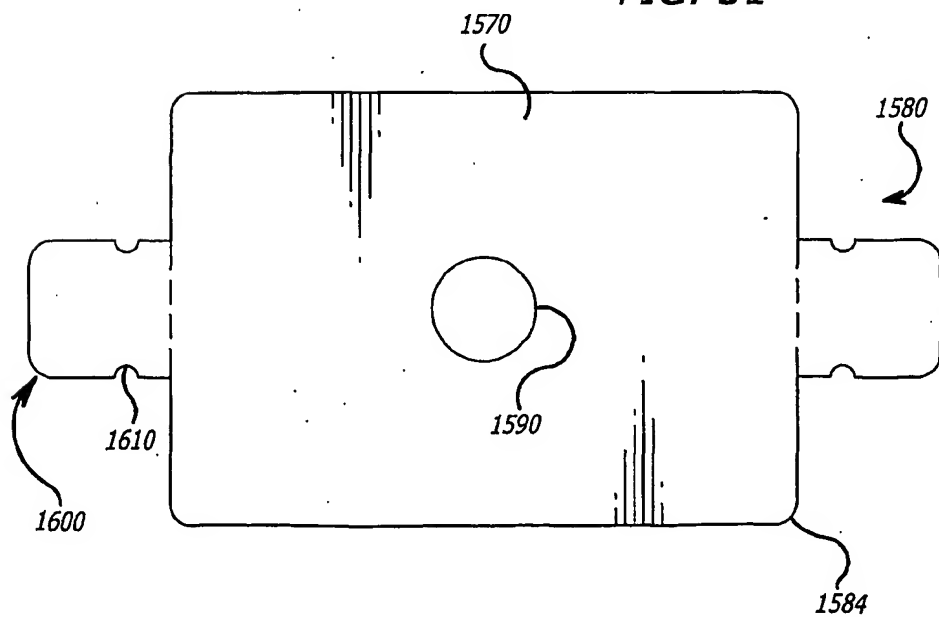


FIG. 51



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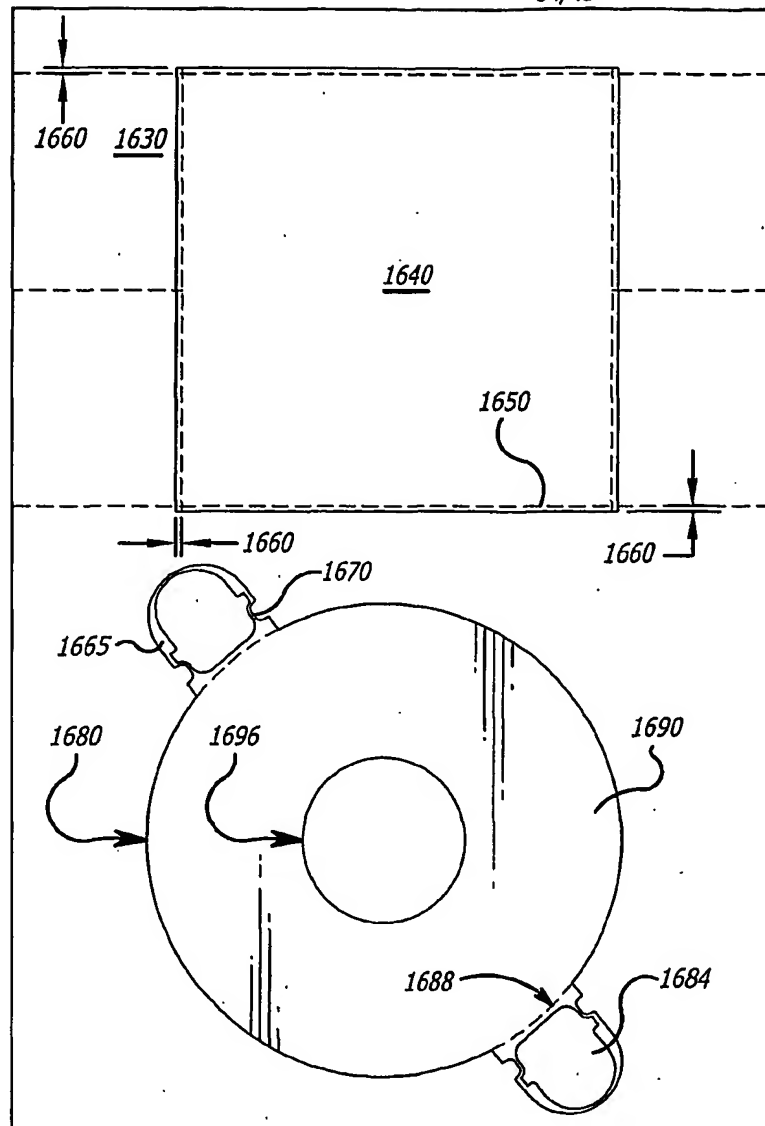


FIG. 52

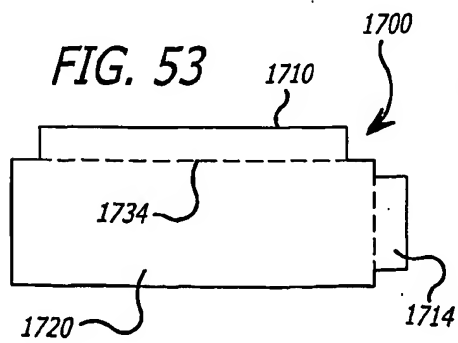


FIG. 53

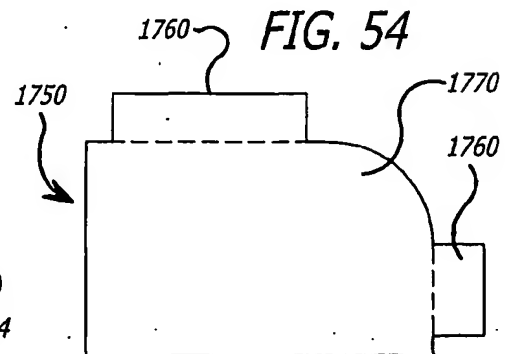
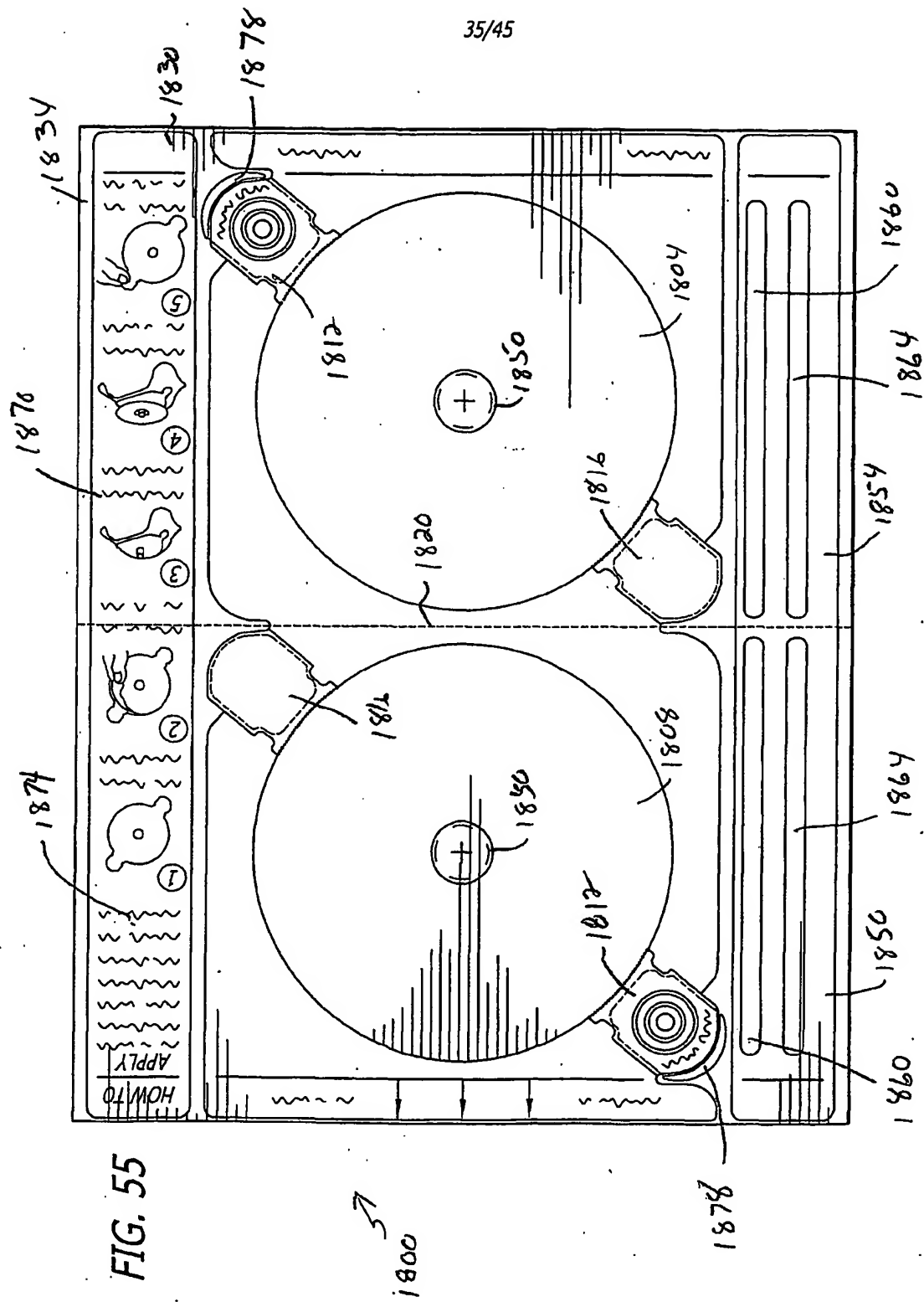


FIG. 54



**FIG. 55**

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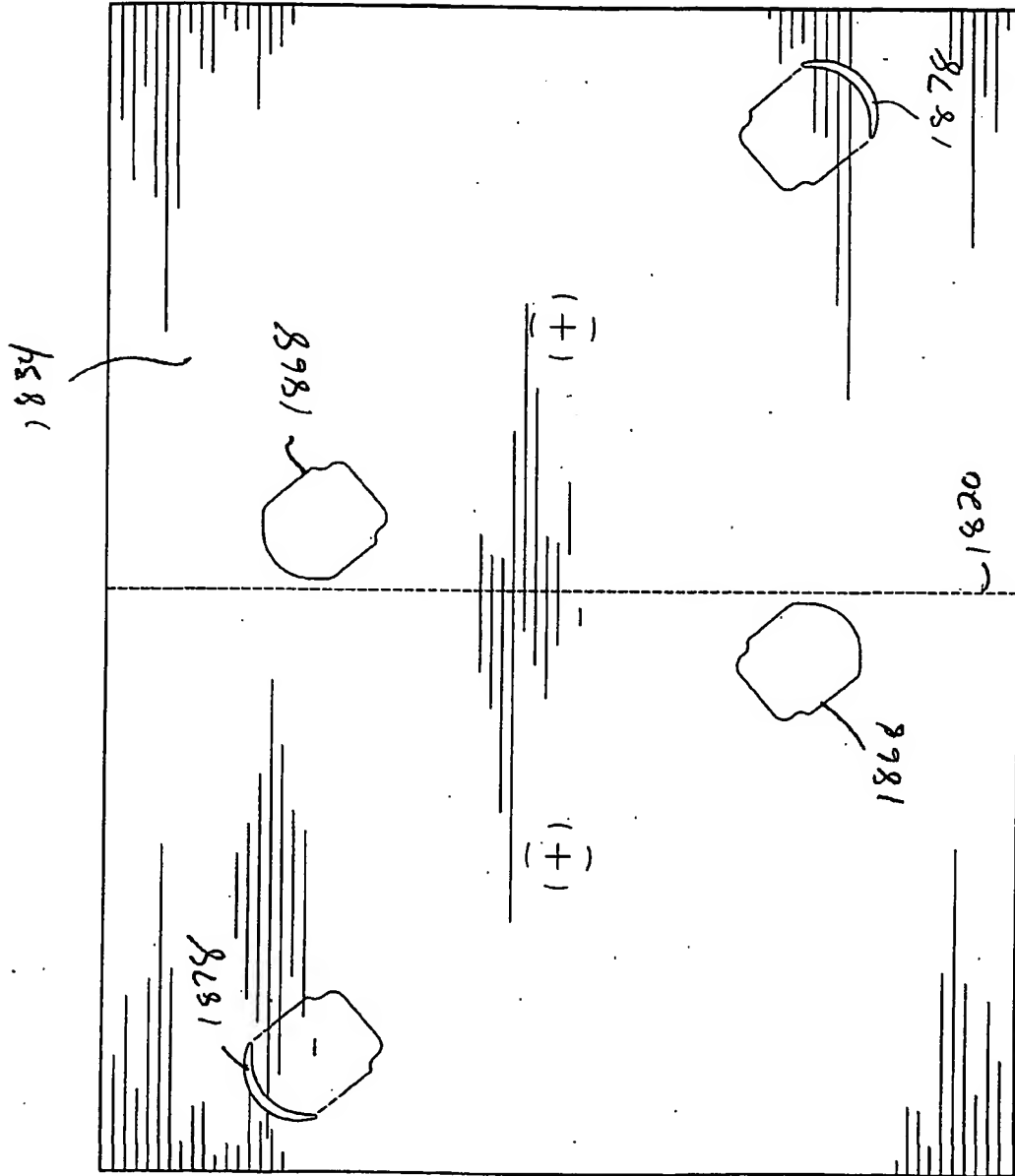


FIG. 56

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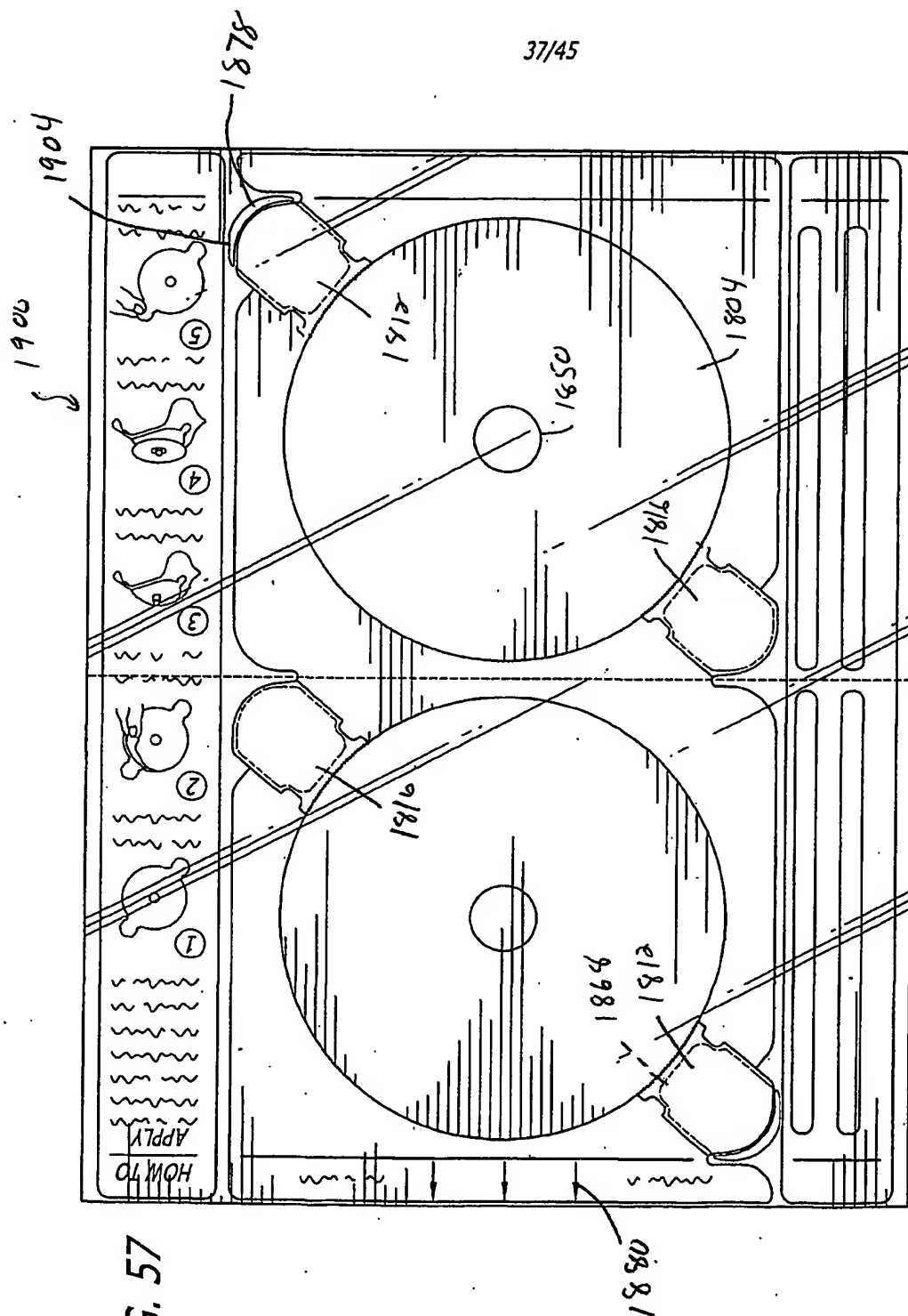
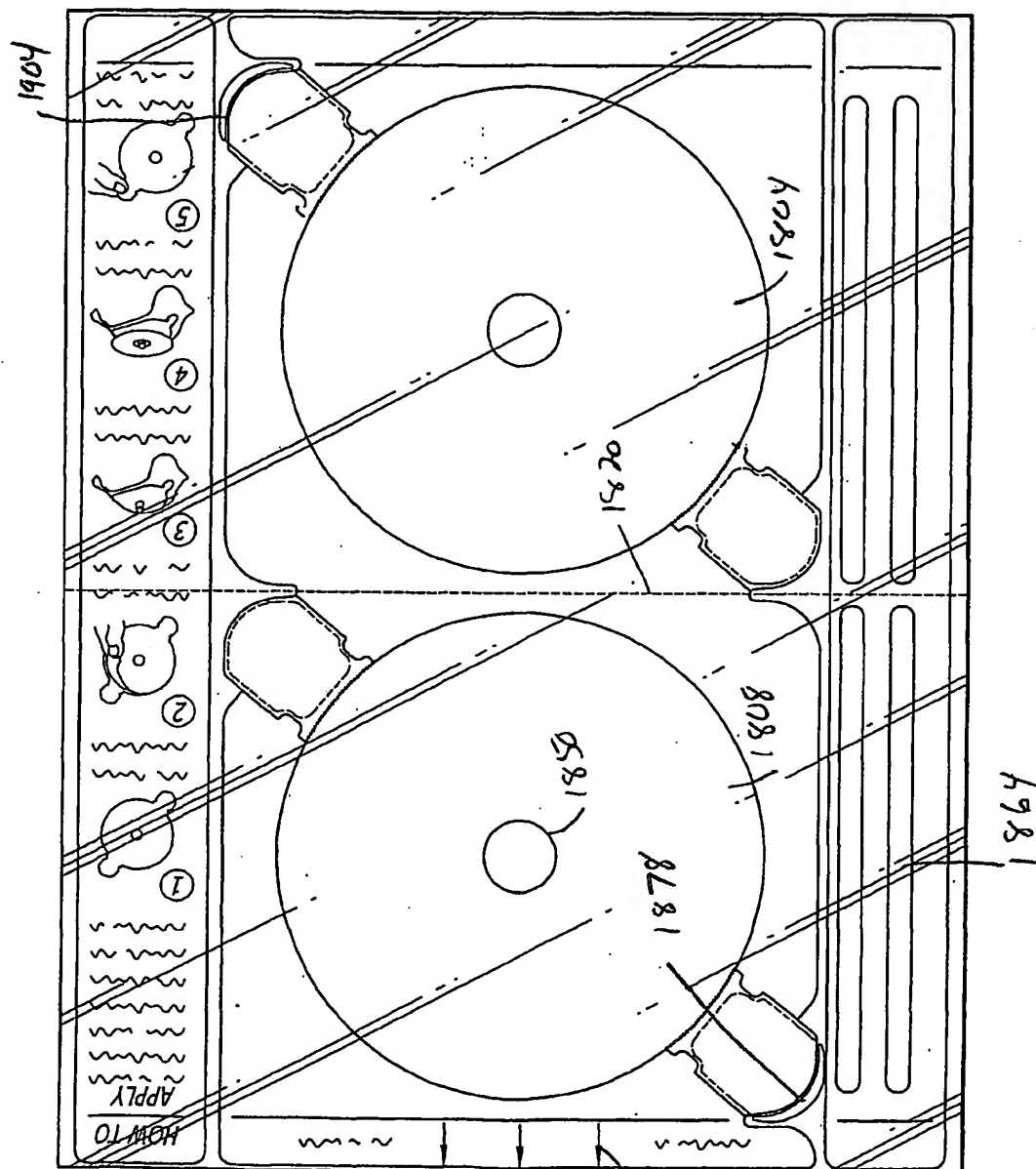


FIG. 57



**FIG. 58**

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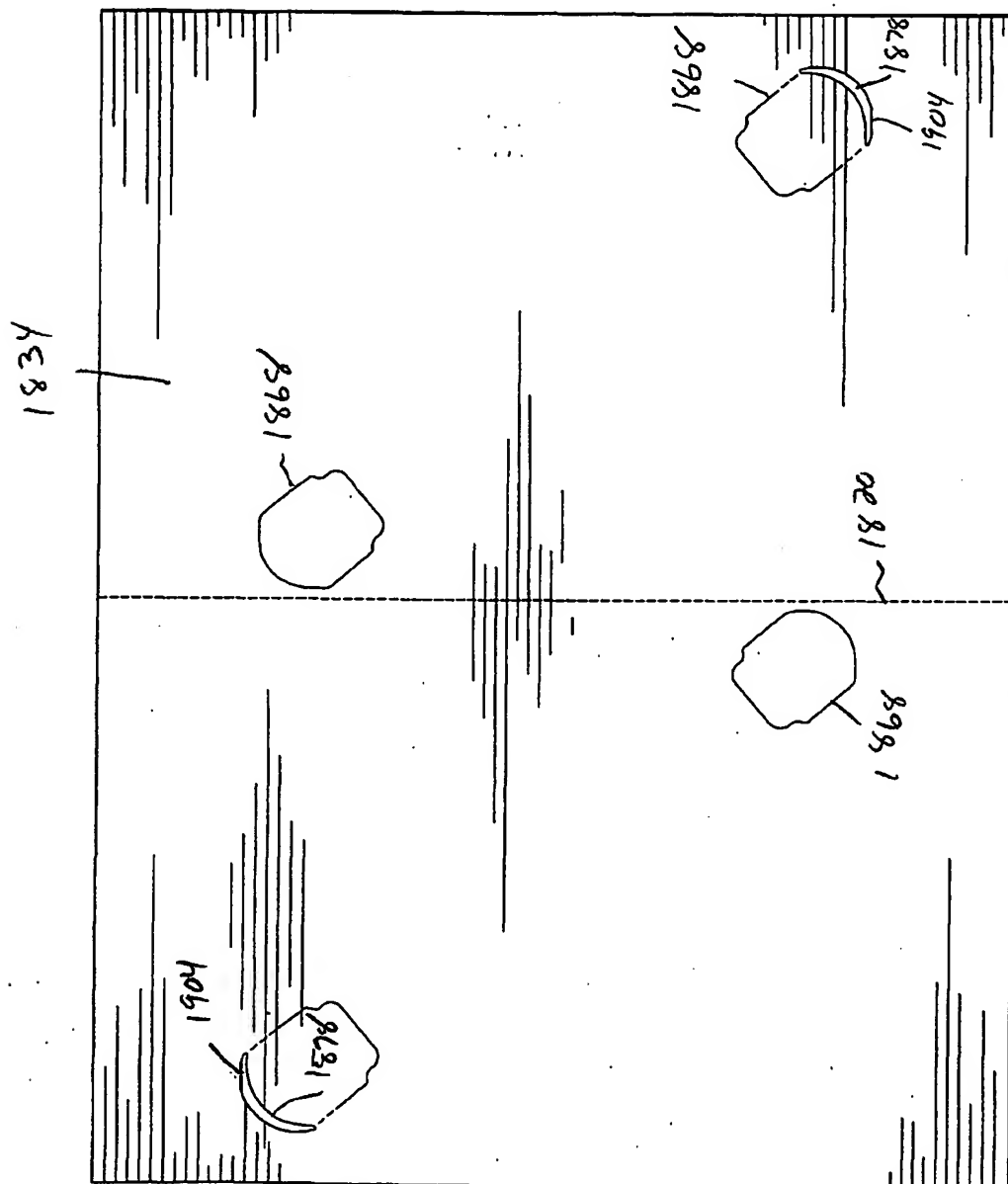


FIG. 59

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FIG. 60

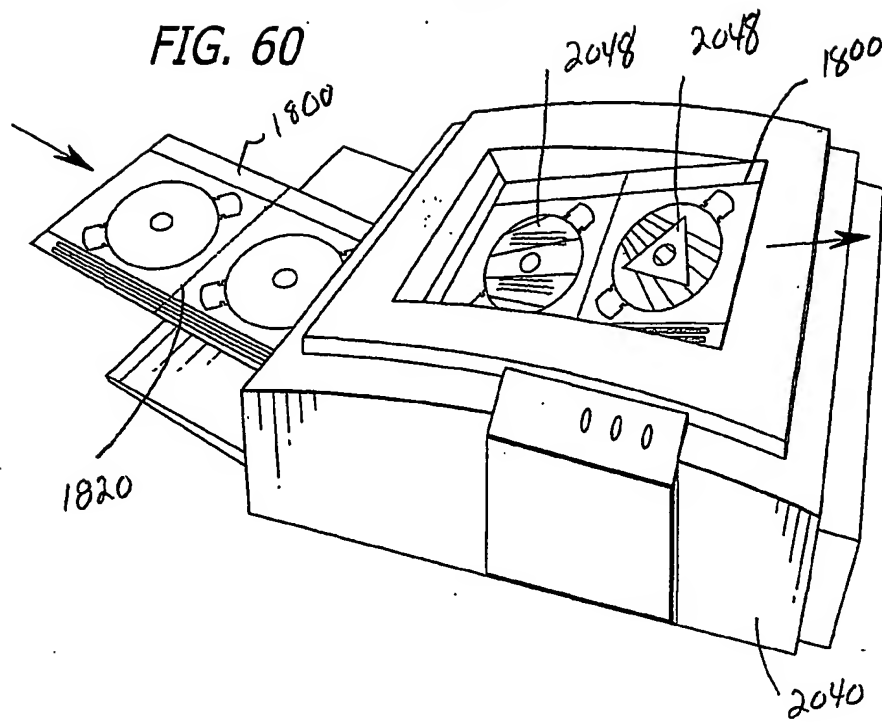
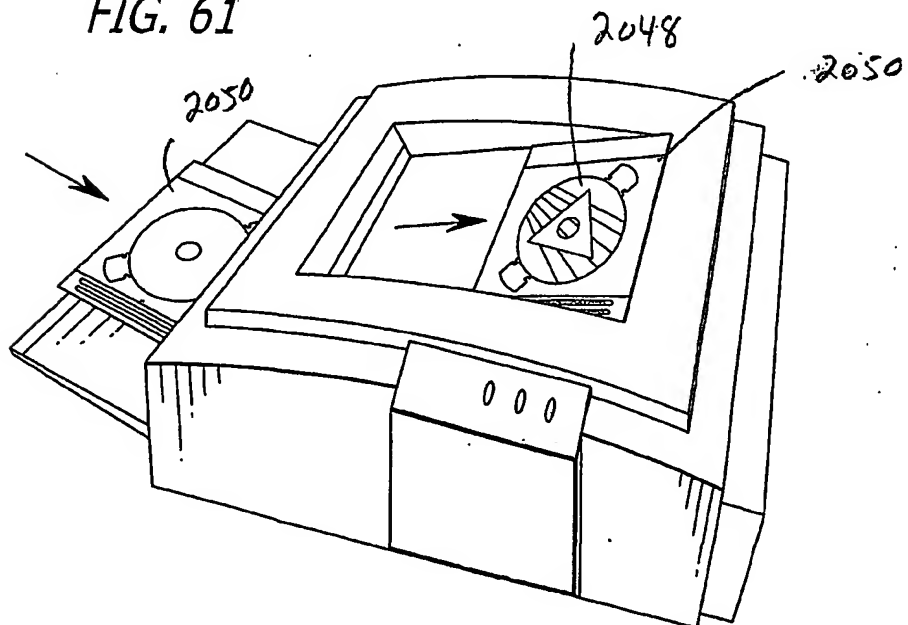
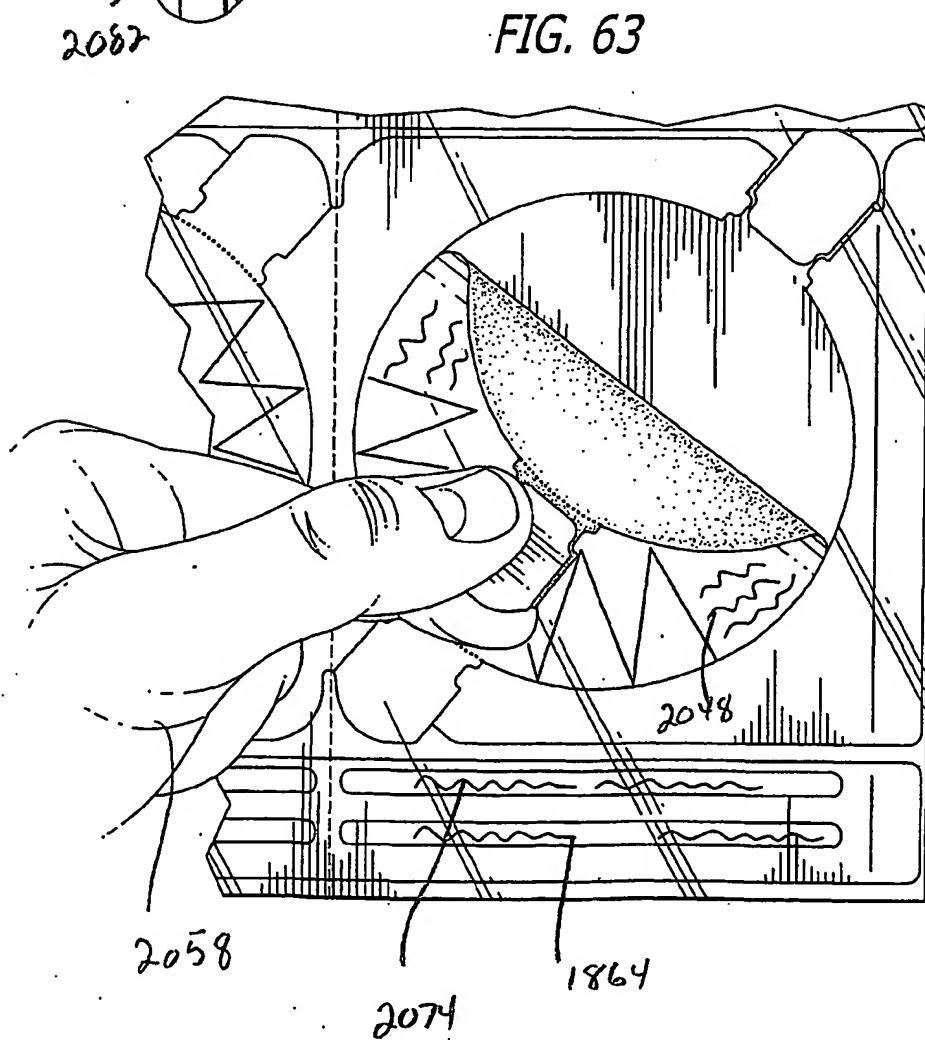
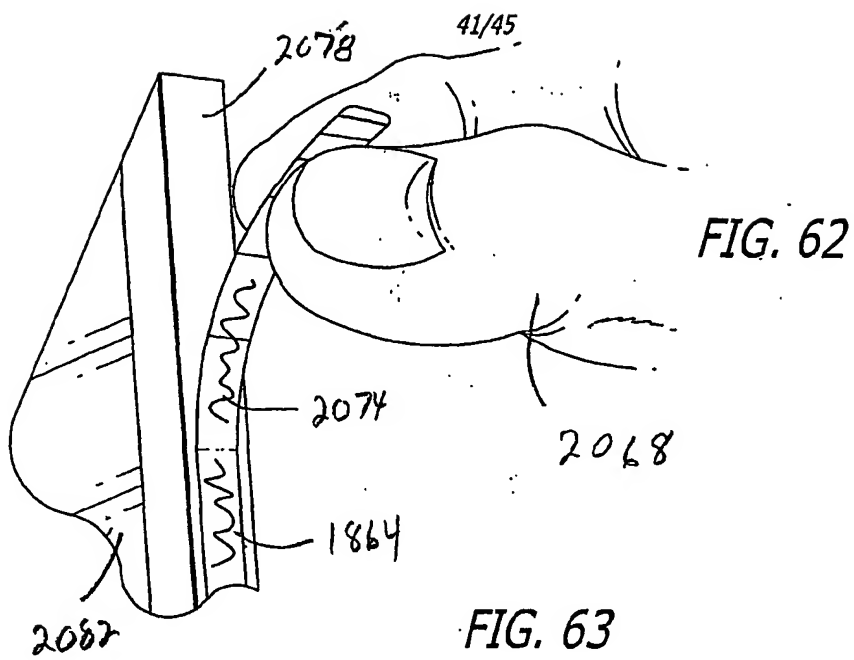


FIG. 61





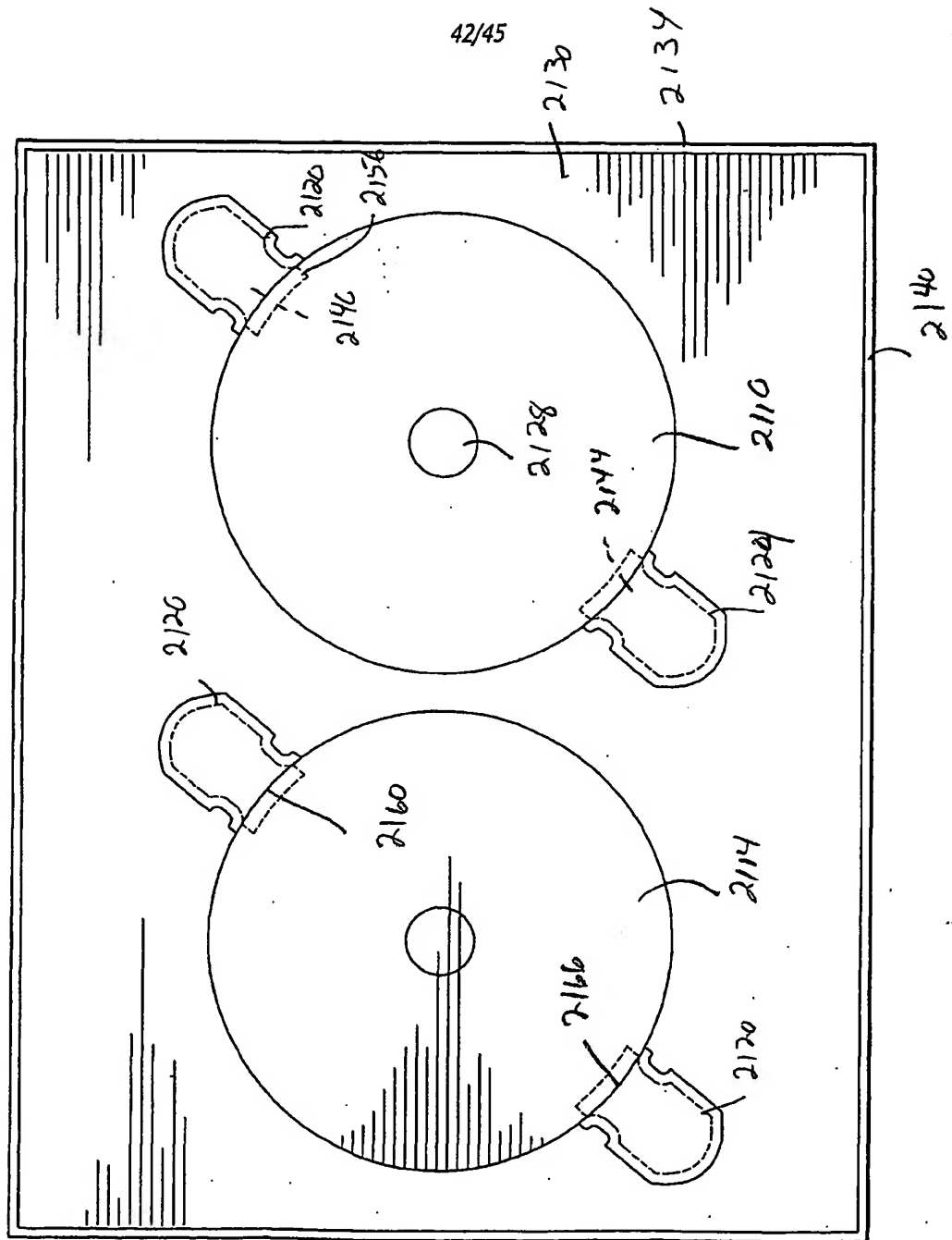
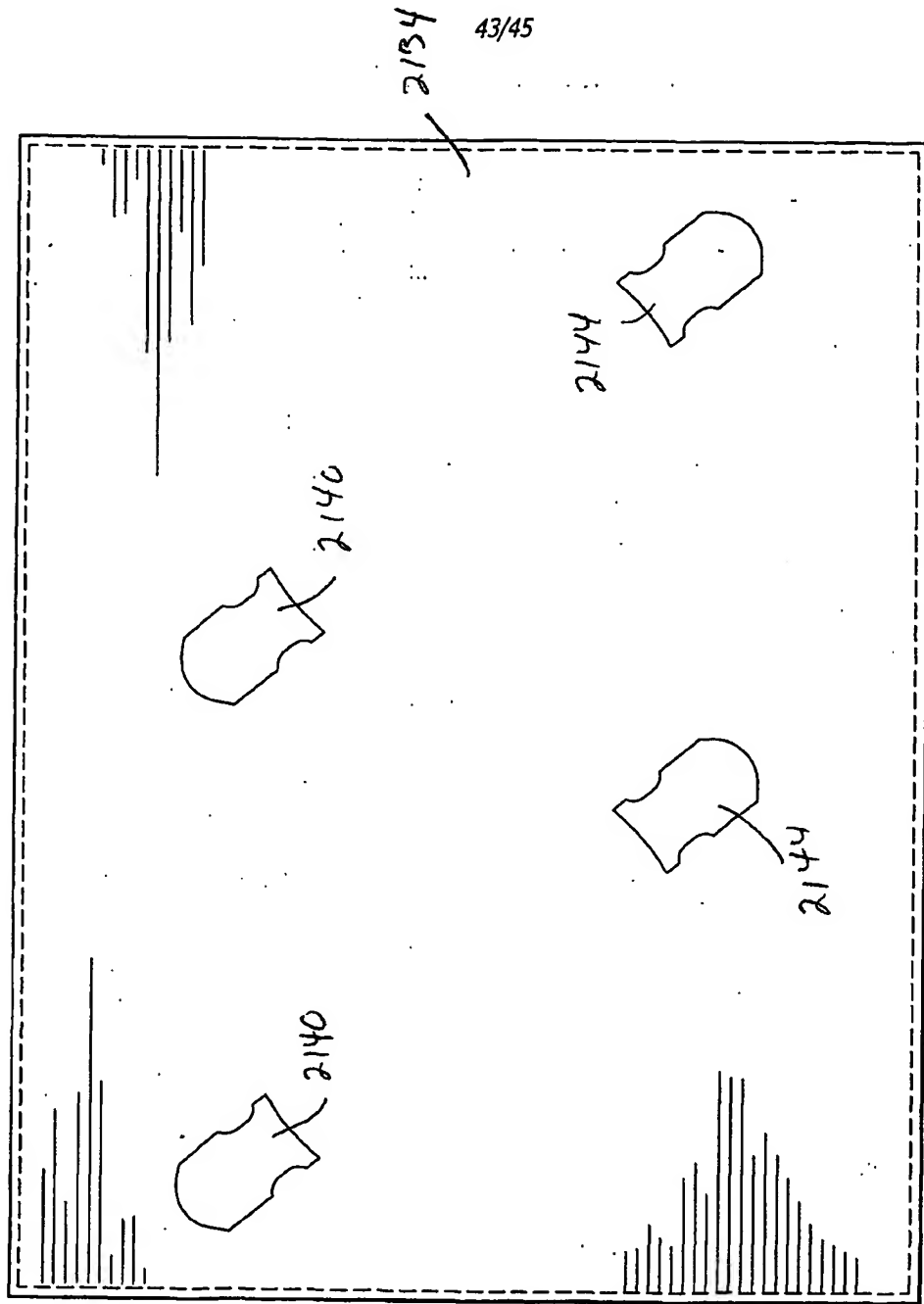


FIG. 64



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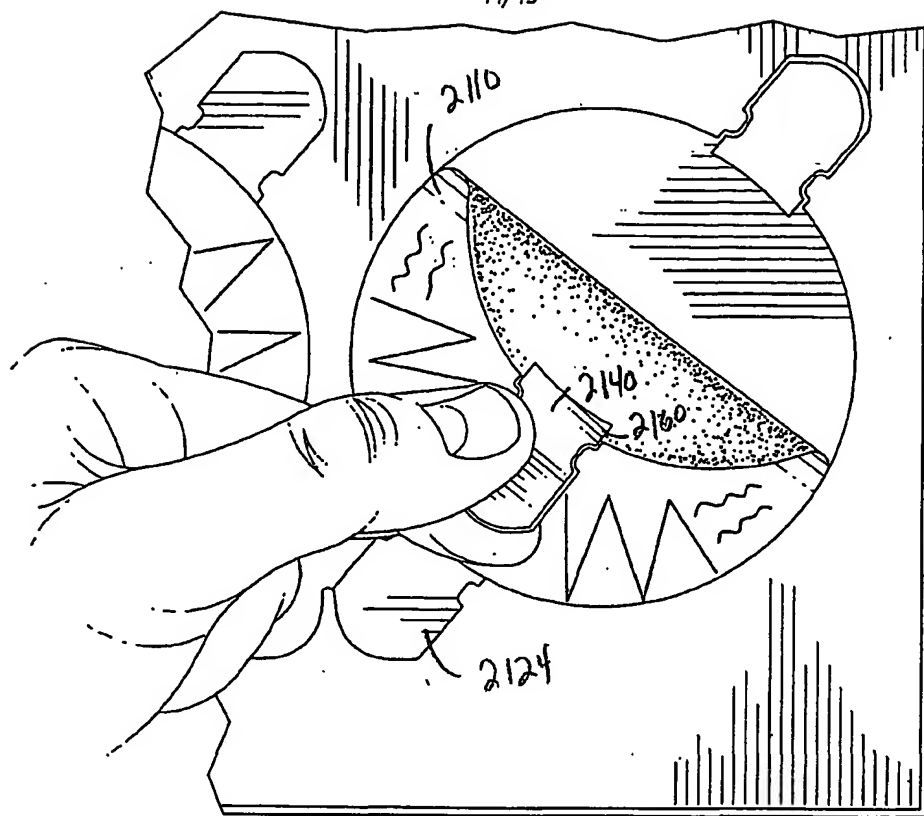


FIG. 66

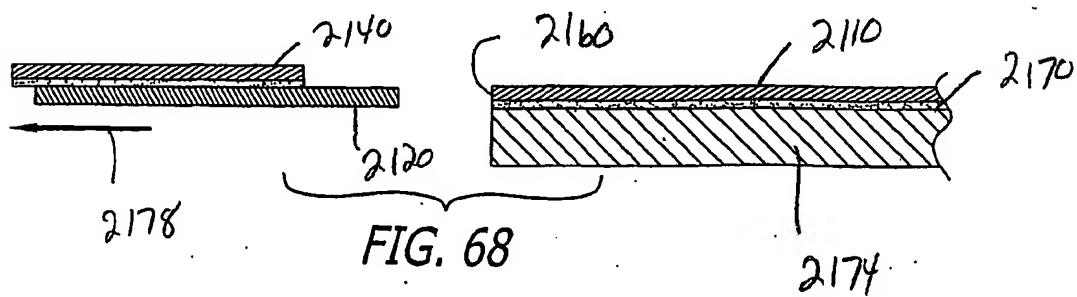
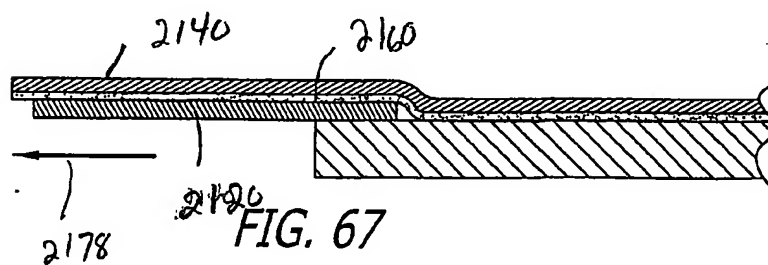


FIG. 69

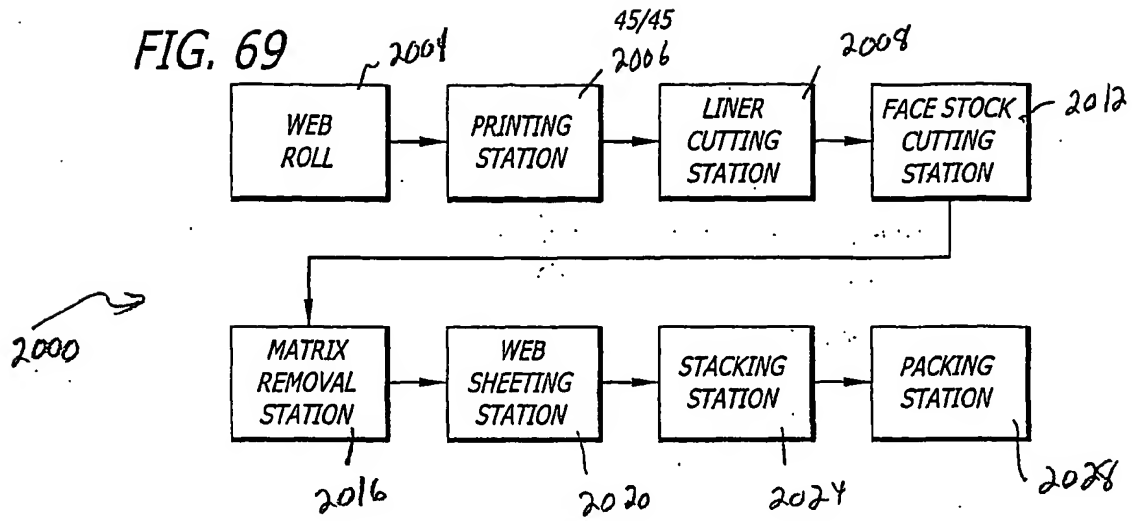


FIG. 70

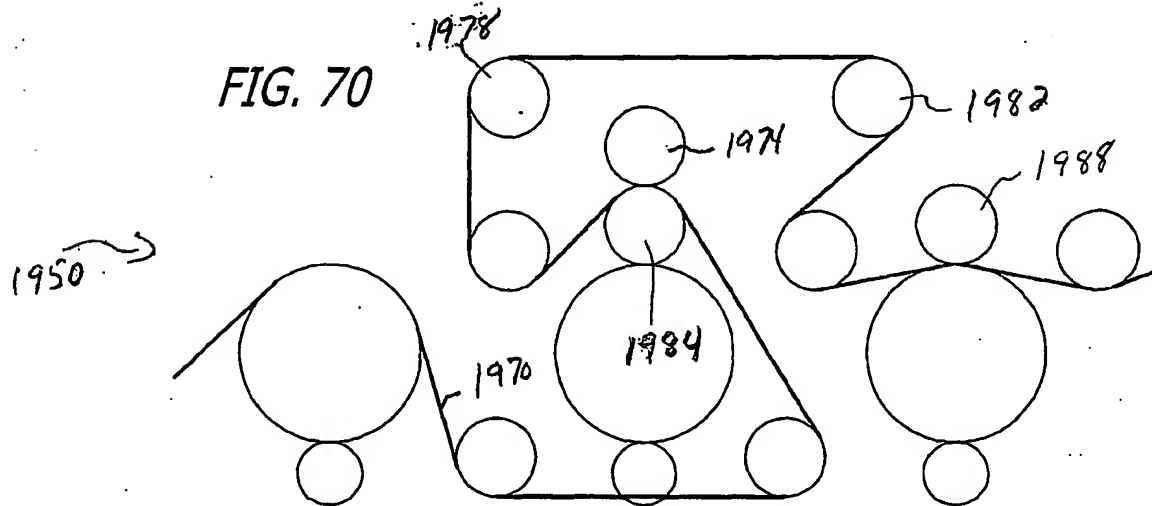
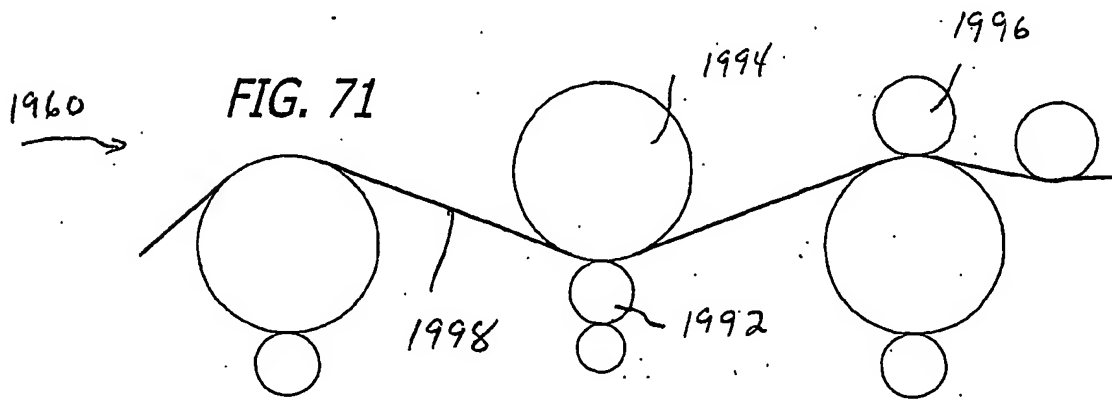


FIG. 71



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/43854

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :Please See Extra Sheet.

US CL :Please See Extra Sheet.

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 428/40.1, 42.1, 42.2, 42.3, 43, 66.6, 192, 194, 914; 40/310, 312, 636; 283/72, 81, 103; 156/247, DIG.2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST; Search terms: label, lable, tabs, die cut, perforate, disc, compact disc.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 5,484,168 A (CHIGOT) 16 January 1996; See abstract and figure-3.	1-2, 4-7, 14, 17, 19-22, 31, 38-44, 54-57, 59-64, 69- 77, 78-80, 84-91 ----- 3, 8-11, 15-16, 18, 23-24, 45-53, 58, 65-68, 81-83
Y	<sup>26</sup> 5,799,982 A (MCCLURE et al) 01 Spetember 1998; See abstract and figure-6.	9, 10, 16, 18, 58, 81-83

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

15 FEBRUARY 2002

Date of mailing of the international search report

05 MAR 2002

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Washington, D.C. 20231

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Authorized officer

NASSER AHMAD

Jean Proctor  
Paternal S. J. J.

Telephone No. (703) 308-0661



# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/48854

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 4,584,219 A (BAARTMANS) 22 April 1986; See abstract and figure-1.	1-2, 4-5, 14, 17, 19-22, 24, 31, 38- 44, 54-56, 57, 61- 64, 69-77, 78, 80, 84-88, 91 ----- 3, 8, 11, 12, 15, 23, 45, 48, 52-53, 65-68
X	US 5,958,536 A (GELSINGER et al) 28 September 1999; See abstract and figure-1-4.	1

INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US01/43854

A. CLASSIFICATION OF SUBJECT MATTER:

IPC (7):

B32B 3/02, 3/06, 3/08, 3/10; B42D 15/00; B65D 65/28; G09F 3/00, 3/10

A. CLASSIFICATION OF SUBJECT MATTER:

US CL :

428/40.1, 42.1, 42.2, 42.3, 43, 66.6, 192, 194, 914; 40/310, 312, 638; 953/72, S1, 103; 156/247, DIG.2